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# TWO FACTORS IN THE PROGNOSIS OF ALCOHOLISM

BY JOHN M. NAGLE, M. D.

## Introduction

One point is stressed throughout this paper, and that is—consumption of alcohol in beverage form is entirely a personal equation. In the course of time, however, too many individuals have preferred to project the blame for their excessive drinking on anything or anybody rather than admit that they themselves were deserving of censure.

The basis for all alcoholic beverages is, of course, the chemical $C_2H_5OH$. Throughout, this will be kept foremost in mind. Since ethyl alcohol in beverage form is one of the most commonly used chemicals, it is not surprising that it is one of the most abused. Almost all individuals who abuse this chemical lack one of the two prime factors necessary to be an accepted or social drinker.

## Prime Factors

For nearly six years now, the problem of alcoholism has been studied by the author, both subjectively and objectively. This study embraces observations made and conclusions reached while dealing with hundreds of males and females committed because of inebriation to Agnew State Hospital in California. It comprises also the analysis of records made in the private practice of psychiatry these past three years.

Reasons are presented herein for failures following prescribed therapy.

Therapy included the recognized institutional procedure of withdrawal of alcoholic spirits, rest, hydrotherapy, vitamins, and other supportive physical measures as indicated; analytical psychotherapy was also included when possible. In addition, the "alcohol susceptibility test" was performed on each case. A detailed explanation of its individual significance was presented to each personality.

In those cases where rehabilitation failed to occur (and they were far in the majority) the reason might be attributed to a lack in the first of the two prime factors.

The first of the two prime factors is the ability to enforce the knowledge gained through therapy. To enforce such knowledge requires the presence of sufficient will power to effect self-control, or self-denial. This, of course, is an intrinsic, subjective, or individual equation. In the last analysis, it is the patient who must travel the road—pointed out to him through therapy—that will bring him to the desired end—rehabilitation, and self-respect.

The second of the prime factors is termed alcohol susceptibility. Each individual possesses a maximum tolerance for the chemical, ethyl alcohol, after it reaches the nerve tissue via the blood stream. The pharmacology of this chemical, we all know; therefore, it need not be mentioned here. Alcohol susceptibility and individual differences in tolerance for ethyl alcohol have already been correlated. (Kelley and Barrera.*) Keep in mind that this factor remains constant, that is, factors which influence absorption and elimination do not change this fundamental—the individual's tissue susceptibility to the chemical, ethyl alcohol.

### Alcohol Susceptibility Test**

Three-hundredeths of a cubic centimeter (.03cc.) of a solution containing ethyl alcohol, 95 per cent U. S. P., and distilled water, 6:4 (approximately 60 per cent) is injected into the skin of the lateral aspect of the deltoid region. An equal amount of physiological saline is used as control. No skin antiseptic is used preceding this intradermal injection.

Hundreds of such injections have been made within the past five years. They were made not only upon individuals hospitalized because of intemperance, but also upon individuals representing a cross-section of the population.

The interpretation of the test is the important factor. Upon its reading, an individual is graded as to his tissue susceptibility to the chemical.

The phenomenon observed following injection is described as follows.

*Psychiat. Quart., 15:2, 224-248, April, 1941.

**Jour. Allergy, 10:2, 179-181, January, 1939.

Immediately after the injection a wheal appears over the site of injection. This wheal formation is common to all individuals. It is about constant in size, 9 mm. in diameter. The formation of the wheal, however, has no significance in relation to the grading, reading, or interpretation of the alcohol susceptibility test. The real significance of the test is the lack of, or presence of, redness or erythema which surrounds the central wheal in different degrees. Six groupings or headings have been tabulated:

| | | | |
|---|---|---|---|
| 0 | No redness ..... | = | Group I |
| ± | Very slight degree of redness..... | = | Group II |
| 1+ | Slight degree of redness ..... | = | Group III |
| 2+ | Mild degree of redness ..... | = | Group IV |
| 3+ | Moderate degree of redness ..... | = | Group V |
| 4+ | Marked degree of redness ..... | = | Group VI |

As stated, the wheal is constant and about 9 mm. in diameter. The area of the various degrees of redness is not of particular significance, but records show that it may be as much as 5 cm. in diameter. The arm is held in a relaxed position while readings are made 20 minutes following injection. The wheal, etc., begin to disappear in about 60 minutes. The average diameters following 200 tests are as follows:

| | | | |
|---|---|---|---|
| 0 | Zero | 2+ | 2.9 cm. |
| ± | 2.3 cm. | 3+ | 3.0 cm. |
| 1+ | 2.7 cm. | 4+ | 3.7 cm. |

It is the degree or intensity of the erythematous area that decides the group or heading. Each group presents a different maximum tolerance for ethyl alcohol. Neither weight nor height has been shown to be of any significance. Results of the test have been constant since first employed over five years ago.

The area surrounding the site of the control injection is examined or interpreted at the same time as the test area. About 96 per cent of the control areas have shown no reaction present at the prescribed time for reading. If redness appears, making the control a positive reaction, the degree of redness is tabulated in the same manner in which the readings are recorded for the test. The reaction of the control is then subtracted from the reading obtained from the test. For instance, if a 2+ reaction appears around

the control and a 2+ reaction is recorded for the test, subtracting the control from the latter would leave the individual reading as a 0 (zero) reaction for the alcohol susceptibility test.

### Interpretation of the Test

Individuals coming under the first heading or zero reaction (no redness) are characterized as possessing the greatest nerve tissue resistance to ethyl alcohol. As the redness or erythema increases, tissue tolerance decreases, or nerve tissue susceptibility increases. This is a simple, accurate test, then, to determine what is known absolutely to exist, and what has been demonstrated by more complicated procedures, that is, that there are individual differences in tolerance for ethyl alcohol.

To determine exactly how much ethyl alcohol each grouping could tolerate, individuals representing a cross-section of the population were taken from each grouping, and subjected to clinical experimentation. The word "tolerate" represents the degree to which each grouping could safely consume alcoholic beverages, from the social aspect. After this zone has been reached, the individual becomes psychologically impaired. This impairment takes place long before a person is termed "drunk." As the word is used today, one who is "drunk" is in a condition that is far beyond psychologic impairment—he is markedly physically and mentally impaired.

Psychological impairment is subjective. As this impairment progresses, it involves the physical as well as the psychical component and becomes more objective in nature so that the term physical impairment may be substituted. Psychological impairment is not desirable, much less physical impairment in any degree.

The individual should be repeatedly impressed with the fact that it is not a sign of being a better man if another possesses a maximum tolerance above his. In other words, this susceptibility is accidental and is not a matter for boasting or, on the other hand, is not a stigma.

It is of interest to note that so many fixed ideas, mostly distorted ideas, are found to exist in the mind of the average person concerning the intake of alcoholic beverages.

One often hears, "I'm not drunk; I can walk that straight line." At the time of expression, this may be wishful thinking. Knowing one's maximum tolerance in relation to alcoholic beverages, however, would serve as a basis for changing many of these fixed ideas.

Imagine what can, and does happen, after an individual passes the "walk-the-straight-line" test to prove himself capable of driving an automobile.

### Individual Maximum Tolerance

The results of experimentation reveal the following amounts to be sufficient, from the social aspect, for any one day or occasion:

Group I: Maximum tolerance 75 cc. (2.5 ounces ethyl alcohol or its equivalent in beverage form).

Group II: Maximum tolerance 60 cc. (2 ounces ethyl alcohol or its equivalent in beverage form).

Group III: Maximum tolerance 45 cc. (1.5 ounces ethyl alcohol or its equivalent in beverage form).

Group IV: Maximum tolerance 30 cc. (1 ounce ethyl alcohol or its equivalent in beverage form).

Group V: Maximum tolerance 15 cc. (½ ounce ethyl alcohol or its equivalent in beverage form).

Group VI: Maximum tolerance 8 cc. (¼ ounce ethyl alcohol or its equivalent in beverage form).

A point here emphasized is that each individual can drink more than his maximum tolerance noted, and not be found staggering. But remember what maximum tolerance means. It means that this is the threshold where subjective manifestations pass over to become objective. In other words, the individual will begin to display impairment in his processes of association and correlation. An alcoholic beverage taken after this point has been reached ceases to be serving a social purpose. When a person is staggering, this point is far passed. Always remember that knowing one's maximum tolerance for ethyl alcohol is the second of the two prime factors necessary to be an accepted drinker, or we may say a social drinker. The first and foremost is the ability to put in practice this knowledge. This requires self-control.

## The Repeated Failure

Many patients have been returned for treatment following previous hospitalization and therapy including intensive analytical psychotherapy, demonstration of their tissue susceptibility by means of the alcohol susceptibility test, its significance, etc.

To explain such failures a classification or table is presented. One utilizing this tabulation in advance can, after evaluating the personality, give a fairly accurate prognosis.

The intellectual level of the majority of the personalities constituting this table ranged from average to a high degree above average.

The presence or absence of the first prime factor is usually detectable in the detailed history obtained from the patient. An individual who has made personal accomplishments which required the use of self-control or self-denial, possesses it to some degree. It may be indicated objectively if the patient has the will to deny himself some of his legitimate, personal pleasures while he is undergoing treatment—not for one week or two, but for some months.

The first factor can be altered, but not the second.

The following personalities noted in the chart are familiar to us all, but just a word in passing.

The term "psychopath" is applied to the individual or personality who cannot consistently stay within the bounds demanded by society. This person possesses a marked trouble-pattern. Fundamentally he lacks inhibitory powers, which in turn spells lack of self-control. The "psychopath-latent" meets, more or less, the demands of organized society until his narrow band of inhibitory powers is reduced to zero, thence the appearance of his anti-social trend which means trouble for himself and others. He is unlike the average individual with one too many, whose inhibitory powers are no doubt altered, but whose band is not necessarily reduced to that of zero. The average individual does not consistently display the trouble-pattern following ingestion of alcohol as do the two groups previously mentioned.

From the table, it requires little or no observation to conclude that a good prognosis is in direct proportion to the ability of the individual to enforce self-control; in other words, he must possess the ability to observe the primary factor.

The term "alcoholic," with all its coloring, may justly be applied to the repeated failure.

THE PERSONALITY AND PROGNOSIS IN ALCOHOLISM

| Personality | First prime factor (Self-control) | Second prime factor (Maximum tolerance) | Analytical Psychotherapy | Prognosis |
|---|---|---|---|---|
| Psychopath | Not developed | Totally disregarded | Employed | Very poor |
| Psychopath (Latent) | Developed only to minimum | Usually disregarded | Employed | Poor |
| With or without Psychologic Problems | Above minimum but is not sufficient | Usually disregarded | Employed | Poor |
| With or without Psychologic Problems | If sufficient | Regarded | Employed | Good |
| Periodical with or without Psychologic Problems | If sufficient | Regarded | Employed | Good |

## CONCLUSION

1. No attempt has been made herein to explain why we partake of alcoholic beverages. The endeavor has been to emphasize the point, however, that consumption of alcoholic beverages is entirely a personal equation.

2. Since it is a personal equation, some individuals must be subjected to reeducation. For those whose education is beginning, the same facts must be brought to their attention. (a) The ability to practise self-control is essential. (b) The individual must possess a knowledge of his maximum tolerance.

3. By means of education and reeducation along these lines, many fixed ideas may be corrected.

4. The alcohol susceptibility test is a simple procedure to evaluate an individual's nerve tissue susceptibility to the chemical, ethyl alcohol.

5. Each individual has a maximum tolerance for ethyl alcohol. If he stays within his tolerance, alcoholic beverages will always be serving him, but this requires the presence of the first or foremost factor—the ability to put into practice this knowledge.

6. The prognosis of the alcoholic patient may be determined by gaining a knowledge of the personality, and by ascertaining whether he is in possession of the ability to enforce self-denial, or self-control.

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# ON THE FEAR OF BEING BURIED ALIVE

BY SANDOR FELDMAN, M. D.

In psychoanalytic practice, one often comes across an exceedingly painful symptom, the obsessional idea, "What if I should be buried alive?" This symptom is of great importance from various points of view, both in children and adults.

In children: 1. It creates depression and distracts attention from the social tasks of life. Hence, it may arrest physical and mental development. 2. It is often the sole cause of night terrors, a fact to which no attention has been paid so far. 3. It disturbs the sleep of children either because they are compelled to entertain the idea until they can find means to prevent such a disaster, or because they are afraid of dreams with such terrifying contents.

In adults, the idea makes an indelible impression on the whole personality, disturbing normal activity and making them try to find arrangements against the dreaded possibility.

In the analysis of both children and adults, the successful resolution of the symptom may lead to the core of the whole neurosis and neurotic personality.

The obsessional idea may appear in early childhood. Often, it starts with fantasies of being completely alone in the whole world. To be placed in a position where one is the sole ruler of the world, owning its treasures and having them at one's disposal may be a pleasant idea at first. Finally, however, the idea is given up. To remain alone in the whole world proves very painful and cannot be endured for the entire course of life. That fantasy is followed by the obsessional idea of being buried alive. This idea, of course, may appear without the preceding fantasy, or it may be forgotten and reappear if conflicts of adult life compel the individual to use it again as an invention of his neurosis.

The whole waking life is obsessed by this fear; but it usually takes possession of the mind of the sufferer at night when he goes to bed with the intention of falling asleep. Sleep is felt as very similar to being buried alive. Subjective consciousness is lost, muscular activity is arrested, but one is still alive. The obsessed person cannot help but imagine a situation in which he is, somehow, put in a condition which causes his family—parents, brothers,

sisters—to consider him dead. The physician pronounces him dead and authorizes his burial. He is either unconscious or, although conscious, unable to give any sign of life; or he is conscious of everything that is going on, but is not capable of preventing his burial. In the latter case, he watches the mourning and despair of those who loved him. Even people who had been hostile change their attitude, and there is no one in the world who is not grieved by his passing.

Finally he is buried, covered over with earth. All relatives and friends leave the cemetery and return to their own ways of life. Hours, days, perhaps months pass. Although buried, unconscious, and without air, the obsessed person remains alive. Grass grows on his grave. Winter comes, and snow covers his underground abode. The mysterious state comes to an end, and slowly life returns to mind and body. He is not yet aware of his dreadful situation. He awakens as from sleep, opens his eyes, and finds that it is dark. "But it might be because it is still night." He tries to move his arms . . . his legs . . . his head. He cannot. His blood runs cold. He emits a howl of horror . . . becomes aware of his confinement in the coffin: He is buried alive, helpless, with no hope of rescue, and—a specially-painful feeling is that parents and relatives cannot learn that he is alive and could be brought back to live with them again. Perhaps they come to visit his grave, perhaps at this very moment they are here, mourning him, remembering him, but it is of no use, it is all of no avail, he is unable to give any sign; his voice is weak or stopped by the earth which covers his living body.

The victim of this obsessional idea has two alternatives. He either finds a solution in imagining that his parents, especially his mother, become suspicious and do not rest until he is dug up, and there is tremendous joy at the reunion, or—and this is more common—he, himself, must invent a means which will prevent his being buried alive.

His relatives should think of this possibility and keep him in his coffin for as long a time as possible before burial. His heart should be either taken out or stabbed through. If this is not done—and they had better not do it because he may be alive—they should open his grave often, instruct the administration of the cemetery

to keep an eye on his grave, or arrange some connection, electric wires perhaps, between his grave and the local officials or the family. Every grave, not his alone, should be supplied with such devices. A pipe should connect his mouth with the outer air so he can breathe until rescued. Worldwide publicity should call the attention of everybody to the possibility of people being buried alive; and absolute protection should be provided by law against such danger. The obsessed person gives credence to stories and rumors which "prove" that all this is not a nightmare but a real danger; and he knows of someone, somewhere, to whom it has happened.

There is no conclusive evidence to show that anyone apparently dead has ever been buried. In the *Deutsche Medizinische Wochenschrift* of November 13, 1919, there is a report of a 23-year-old nurse who committed suicide by poisoning because of frustrated love, was pronounced dead, buried, unearthed after 14 hours by the authorities, in order to ascertain her identity, and found to be alive. (She recovered.) Even if this report is accepted as a fact, the possibility of such an occurrence is so remote that the fear of it cannot be considered rational and justified. Proof that the fear is neurotic is supplied by the fact that it either disappears by itself or can be understood and dispelled by psychoanalytic treatment, when the patient understands all the things he brought up in support of the reality of his fear.

A young girl suffering from fear of darkness, fire, etc., relates that between her fifth and eighth years she suffered tremendously from the fear of being buried alive. In the course of the consultations, she gave a classic description of that fear as presented in the foregoing. In addition, she said that she would not have minded being buried alive if her father or mother or both had been buried, too, in the same grave with her. In her fantasies, she especially enjoyed the reunion with her parents after being dug up from the grave. This statement alone would have sufficed to show that this was not a fear of death but *a fear of not being loved and of being incapable of returning love.* But the girl's consultations brought further proof of this.

She was the child of well-to-do parents. She had everything she wanted but the attention of her parents. She had her own room, clothing, toys, books, entertainments, sports, governesses, but could

seldom enjoy the happiness of being with her parents. Her father was busy the whole day; the few minutes he had for her were filled up with hugs and kisses and unpacking the toys he brought her almost every day. When dinner-time came, she was left in the care of the governess, with the painful explanation and excuse that her father needed this time to be alone with mother to talk things over. At night, she was already asleep when her parents came home; and she could not visit father and mother in bed for a while as, she knew, other children did. Mother, keeping late hours, was still asleep in the morning when she left for school or for a walk with the governess. When she came back, mother had usually gone out. In the afternoons, mother went shopping or to bridge parties; and, on holidays, she was busy with parties of her own. The child did not feel that she was being loved; and she could not love her parents, either, because she had no opportunity to do so. She had parents, but they were not available. The "everything" she had, counted for nothing. What she wanted and needed was the affection of her parents and the opportunity to love them. She seemed to be relieved of a pressure and accepted with a laugh the writer's explanation that "this was really to be buried alive, to be dug out of the grave and to have a reunion with one's parents."

In everyday language one often hears and uses the expression, "You do not exist for me," "You are a dead man for me," if one feels resentful and threatens a person with the withdrawal of love. When a dear person does not love one, when one does not count, he feels as if he were dead.

Not to be loved or not to love is expressed by the fear of being buried alive. It explains also the fear of death itself. Only he who loves and is loved feels he is alive and is not concerned with death. Not thinking of death, he is not afraid of it, even in old age. As is well known, the desire to repeat the experience of being in the mother, in the womb where one was buried alive and yet connected with the world and taken care of, also returns regressively in the fear of being buried alive and in the fantasy of arranging some kind of communication with the loved ones while alive in the ground. (Freud, Stekel, and others.)

A man suffered for many decades from the fear of being buried alive. It began with fantasies in childhood of being entirely alone

on earth and owning everything. These fantasies were replaced by the other, the fear of being buried alive. Almost all day and night, he indulged in this obsessional idea, being stirred up by the slightest occurrence concerned with death.

He could have loved and could have been loved, but he did not accept anybody's love and did not love anybody. He loved only sensually and accepted only the sensual side of love, causing pain and suffering to all who loved him or tried to love him. Therefore, he never became attached to any one object but ran from one to the other, exploiting the situation only sensually, becoming disappointed and leaving bitter disappointment behind.

He often wondered whether anybody would be present at his funeral. He questioned it and felt the pain of isolation. But he could not help his situation. He tried unsuccessfully to change. He loved one person, his mother. But in actuality, he treated her with indifference. She was not real any more, because she was sensually inaccessible. He indulged in an abundance of fantasies depicting his mother as dead and himself spending days and nights at her grave.

A short time after he had found a new object of love, he would return in his fantasies to the abandoned ones, and gain more sensual pleasure through masturbation, recalling the sweet hours he had spent with them. He could not love the present one, only those who already had "passed."

He felt he was alone and virtually buried alive. When he retired to sleep, he was tortured by the obsessional idea of being buried alive, but he finally would fall asleep when he managed to assure himself that through certain mechanical arrangements he was still connected with his relatives. He thought that after being rescued he would be able to love those he could not now love because of his conflicts.

In certain other patients, moral discontent with themselves was found to cause this obsessional idea. A person is "dead" although physically alive if he cannot respect himself; he is buried alive if he cannot live up to his moral and ethical ideals.

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# CONTRASTING SCHIZOPHRENIC PATTERNS IN THE GRAPHIC RORSCHACH

BY JOSEPH R. GRASSI*

## Problem

The "Graphic Rorschach" technique is fully described in a forthcoming publication setting forth its application to a large unselected group of subjects and patients.[1] In that study, no individual clinical group was studied in detail, nor was any attempt made to relate features of the graphic Rorschach performance to clinical data except for diagnostic category.

The present study deals with a randomly selected group of patients who were diagnosed as schizophrenic during their stay in Fairfield State Hospital, Newtown, Conn. Each member of the group has been followed for at least five months, and the majority for eight months or more. Careful survey has been made of their clinical records over this period.

## Method

The distribution of the experimental group, numbering 28, with significant clinical data, is listed in Table 1. The standardized method of procedure used in obtaining the records is briefly described in summary. The graphic Rorschach technique is considered as a supplement to the verbal Rorschach and is, therefore, administered at the conclusion of the verbal Rorschach inquiry. The graphic can be deferred until a later sitting, if necessary, in order to avoid fatigue. Each card is presented to the subject in the usual order, with specific instructions to sketch from the card the impression which he has just described. He receives freedom to omit, alter or add to the given features.

At the completion of the drawing, the subject or patient is asked to point out the relation between his drawing and the blot. The drawings are analyzed and investigated in five principal areas; therefore, the examiner must question the subject until sufficient in-

*Since this paper was written, the author has entered active military service. He is now clinical psychologist at the Station Hospital, Fort Dix, N. J., with the rank of sergeant in the medical corps, United States Army.

TABLE 1

| Age | Sex | Diagnosis | Hallu-cinated | De-luded | Ill before hospital | Time since admission | Condition |
|---|---|---|---|---|---|---|---|
| 37 | F | Dementia præcox, hebephrenic | Yes | Yes | 27 mos. | 9 mos. | Unimproved |
| 28 | M | Dementia præcox, catatonic | Yes | Yes | 2 weeks | 6 mos. | Unimproved |
| 33 | M | Dementia præcox, simple | No | No | 6 mos. | 5 mos. | Unimproved |
| 27 | M | Dementia præcox, catatonic | Yes | Yes | 2 weeks | 2 mos. | Improved |
| 39 | M | Dementia præcox, paranoid | No | Yes | 58 mos. | 7 mos. | Unimproved |
| 27 | M | Dementia præcox, hebephrenic | Yes | Yes | 11 yrs. | 5 mos. | Unimproved |
| 25 | M | Dementia præcox, catatonic | Yes | No | 2 yrs. | 11 mos. | Unimproved |
| 31 | F | Dementia præcox, undetermined | Yes | Yes | 5 mos. | 3 mos. | Improved |
| 20 | F | Dementia præcox, catatonic | Yes | Yes | 7 yrs. | 4½ mos. | Improved |
| 28 | M | Dementia præcox, undetermined | Yes | Yes | 9 mos. | 2 mos. | Improved |
| 37 | M | Dementia præcox, undetermined | No | Yes | 21 yrs. | 7 mos. | Unimproved |
| 36 | M | Dementia præcox, paranoid | Yes | Yes | 1 yr. | 9 mos. | Unimproved |
| 26 | M | Dementia præcox, paranoid | No | Yes | 2 mos. | 2 mos. | Improved |
| 23 | M | Dementia præcox, paranoid | Yes | Yes | 4 yrs. | 1 yr. | Unimproved |
| 25 | F | Dementia præcox, paranoid | No | Yes | 5 mos. | 1 yr. | Unimproved |
| 30 | M | Dementia præcox, hebephrenic | Yes | No | 10 yrs. | 8 mos. | Unimproved |
| 36 | M | Dementia præcox, hebephrenic | Yes | Yes | 12 yrs. | 9 mos. | Unimproved |
| 23 | M | Dementia præcox, simple | No | No | 4 yrs. | 9 mos. | Improved |
| 24 | M | Dementia præcox, undetermined | Yes | Yes | 8 mos. | 7 mos. | Unimproved |
| 40 | M | Dementia præcox, paranoid | Yes | Yes | 4 yrs. | 10 mos. | Unimproved |
| 23 | M | Dementia præcox, catatonic | Yes | Yes | 1 yr. | 6 mos. | Improved |
| 28 | M | Dementia præcox, catatonic | No | No | 3 yrs. | 22 mos. | Improved |
| 32 | M | Dementia præcox, paranoid | Yes | Yes | 2 yrs. | 1 yr. | Improved |
| 24 | M | Dementia præcox, simple | No | No | 2 yrs. | 6 mos. | Unimproved |
| 19 | M | Dementia præcox, simple | No | Yes | 3 mos. | 5 mos. | Improved |
| 45 | F | Dementia præcox, simple | No | No | 16 yrs. | 11 mos. | Unimproved |
| 25 | M | Dementia præcox, hebephrenic | Yes | Yes | 2 yrs. | 9 mos. | Unimproved |
| 26 | M | Dementia præcox, paranoid | Yes | Yes | 4 mos. | 25 mos. | Unimproved |

formation is available so that accurate ratings in these areas can be made. When the subject fails to recall his original responses, he is asked to tell what the blot represents to him now. The instructions are then followed for the new response, at the conclusion of which he is reminded of his previous response and asked to draw that also. This procedure is followed for each card.[2]

The drawings are then rated and scored according to the established criteria. These rating scales were established on the basis of the observations of the earlier clinical study,[1] and revealed that the drawings ranged from one extreme of a card-copy, to one which was entirely unrelated to the blot form, to such an extent that in most cases it was impossible to know the card from which the concept was derived. Further study revealed a parallel continuum from the former type of drawing to the latter. The card-copy type of response is designated as a "blot-dominated" response; the other type as "concept-dominated."

The scoring criteria in the five fields of variability are as follows. (See Chart I.)

A. *Utilization of Component Parts of Area to Which Response is Directed.* In this category, is analyzed the degree to which the constituent elements of the portion selected are dominant in the drawing. The blot-dominated response includes many features of the local patterning not logically related to the concept; and, in rare instances, the subject may become so involved with the component details as to distort the part-whole relationships. The concept-dominated response reproduces only the general contour of the blot form without characteristic features of the separate parts; this tendency may likewise be expressed to lesser or greater degrees. A balance between these two tendencies is represented at the midpoint of the scale.

B. *Utilization of Total Blot and/or Its Parts.* Here, attention is directed toward the degree to which the patient maintains or alters the structural unity of the separate blots. As in each of the other areas, there is an observable continuum from one extreme to the other—in this case, from the individual who fails to disturb the given Gestalt even though he thus includes sections or areas irrelevant to his concept, to the individual who selects an inconspicuous blot feature as his starting point and builds around it until a totally

CHART I

## THE GRAPHIC RORSCHACH

## RECORD FORM

COPYRIGHT 1942
By
Gregory N. Rochlin, Kate N. Levine, and Joseph R. Grassi

Name..... Age..... Examiner.....

Date of Verbal Rorschach..... Date of Graphic Rorschach.....

### Scoring Criteria

A. Utilization of component parts of area to which response is directed. (Elaboration)

1. Details included, serving no function, losing relation to whole.
2. Details included, serving no function, maintaining integrity of whole.
3. Conspicuous details included as functional.
4. Details omitted without disturbing integrity of the whole.
5. Extreme disregard for given details.

B. Utilization of total blot and/or its parts. (Organization)

1. Total indiscriminate use of blot, to include every detail.
2. Reproduction of several unrelated areas in one drawing. (False unity.)
3. Use of details and/or wholes pertinently.
4. Use of details to give meaning to whole. (DW)
5. Pertinent use of detail without meaning for whole.

C. Modification of the form of the blot; accepted, utilized, or rejected. (Accuracy)

1. Intense effort toward precise reproduction.
2. No spontaneous modification of gross form.
3. Modification to compromise between blot and concept.
4. Draws concept with poor preservation of blot form.
5. Impressionism.

D. Use of the color of the blot

1. Automatic color matching.
2. Use of color directly related to the color of the blot.
3. Pertinent use or omission of color.
4. Failure to use color in color-determined response.
5. Deliberate introduction of color not present in blot.

E. Introduction of additions not present in blot. (Elasticity)

1. Absence of additions pertinent to concept.
2. Absence of supplementary additions.
3. Spontaneous additions to supplement or enhance form.
4. Additions irrelevant to the form of the blot.
5. Additions without regard for form of the blot, sacrificing form.

new organization of parts is represented in his drawing. The midpoint of the scale again represents a balance between the two forces.

C. *Modification of the Form of the Blot; Accepted, Utilized, or Rejected.* In this area is investigated the extent to which the blot form is purposefully kept intact or altered. Here, the range is from the type of drawing which contains no modification of the gross form of the blot, and is frequently accompanied by the subject's statement that he desires to reproduce the blot as accurately as possible, to the drawing in which excessive modification or alteration is present so that the final production represents a schematic representation of the patient's concept with no adaptation of the blot form to the scheme—rather the ignoring of it. The latter productions bear little or no resemblance to the blot form. The scale midpoint again represents a balance between the two extremes, in that blot form is altered in minor respects to provide better representation of the concept described; prominent features are maintained, but there is evidence of the adaptation of the given form.

D. *Use of the Color of the Blot.* This area deals with the relation between colors used in the drawings, and the colors present in the blot. The two extreme types of performances are on the one hand an attempt to "color-match," that is, an attempt to reproduce the exact color, and in some instances the exact shade in the drawing even when the color is contradictory to the concept. On the other hand, there is deliberate introduction of colors not present in the blot areas described for the purpose of enhancing the concept. Pertinent use or omission of given color is at the midpoint of the scale in this area.

E. *Introduction of Additions not Present in Blot.* This deals with spontaneous supplements to the features of the blot, or their absence. At one extreme is the drawing which contains no additions to the blot form, even when the subject remarks that there are things lacking; at the other extreme, the drawing has additions not related to the form of the blot which are so prominent as to obscure the blot features, sacrificing form. The midpoint performance contains additions to supplement or enhance form, which help depict the described concept better; but they remain secondary to characteristics related to the given blot form.

A few illustrative instances of blot and concept dominance may clarify the scoring. Figure 1 represents two responses to Card I. The first patient (upper drawing) said, "Sort of a map-like, wouldn't it be? Reminds you of a map of countries. Isn't exactly like the U. S., but this part up here starts like Washington and Oregon. Just this corner gave me the idea, but it's the whole thing." Here many blot features irrelevant to the concept have been included, blot organization has been maintained intact, and no spontaneous alterations or additions are introduced; this is obviously a blot-dominated production. The second drawing illustrates a concept-dominated performance depicting "a turtle with large flippers." General blot form has been only schematically reproduced, with so much omission, alteration and addition on the part of the patient that the blot itself is barely recognizable.

The same contrast is found in Figure 2, between the upper blot-dominated drawing, "Cross section of the female genitals, ovaries, etc.,—the whole thing," in response to Card VII, and the lower concept-dominated representation of, "Two women looking at each other. They have high-crowned hats on and are quarreling with each other. I'll dress one up in brown and one in something else," seen in the same card.

Figure 3 is a striking representation of the depth of blot-dominance which may occur. This patient had described two distinct and separate concepts, in response to Card III, and drew each. The left-hand drawing is "Donald Duck," and the right-hand one depicts "African pygmies doing a tribal dance;" the almost camera-perfect reproduction of the blot in both instances reveals the subject's inability to represent his different concepts as being different when they are derived from identical blot areas.

Using the criteria given, the records of the 28 subjects of this study were evaluated. The patient's graphic responses for each card were scored; and he thus had five ratings for each drawing, one in each of the main areas. The average of each area ("A, B, C, D, E") was charted for the 10 cards in the average vertical graphs, thus representing the relationship of one area to another for a given subject. The consecutive ratings in each area were charted in the horizontal graphs. This procedure made available an evaluation of the ratings of all 10 cards within a single area.

The data were represented on the deviation charts by plotting blot-dominated responses above the line, and concept-dominated responses below the line; the sub-groups in each of these directions were represented by different types of shadings. Solid black signifies "1" scores, diagonal shading represents "2's," horizontal lines represent "4's," and vertical lines represent "5's." (It is well to note that the responses which are not predominately influenced by either blot or concept do not appear in the deviation chart, and that the total blacked-in area is therefore a measure of the degree of failure to achieve a balance between blot and concept.)

One further scoring device was used. The relation between blot-dominance and concept-dominance, was expressed in the "Blot-Concept Quotient," arrived at in the following manner. Each "1" rating and each "5" rating has a value of 2; each "2" rating and each "4" rating receives a value of 1. The sum of the concept-determined responses is subtracted from the sum of the blot-dominated responses, and the result (+ or —) is divided by the total number of ratings made. Thus, the formula would read:

$$\frac{(1\text{'s}\times 2+2\text{'s}\times 1-4\text{'s}\times 1+5\text{'s}\times 2)}{\text{Number of drawings}\times 5}$$

Thus, plus values indicate prevalence of blot-dominance and minus quotients signify a greater amount of concept-dominance.

## Results

Figure 4 illustrates the deviation patterns obtained for the present group of subjects. The outstanding characteristic of these charts is the total amount of deviation from the scale midpoint. This is easily observed in the deviation patterns in Figure 4, by the large total area colored in. Analysis of these patterns revealed the following characteristics common to the entire group. What appear to be significant trends are indicated by asterisks.

Area A: Utilization of component parts.

9 Schizophrenics have over 50% "4's" and "5's"

8 Schizophrenics have over 50% "1's" and "2's"

*26 Schizophrenics have over 40 % total deviation.

Figure 1

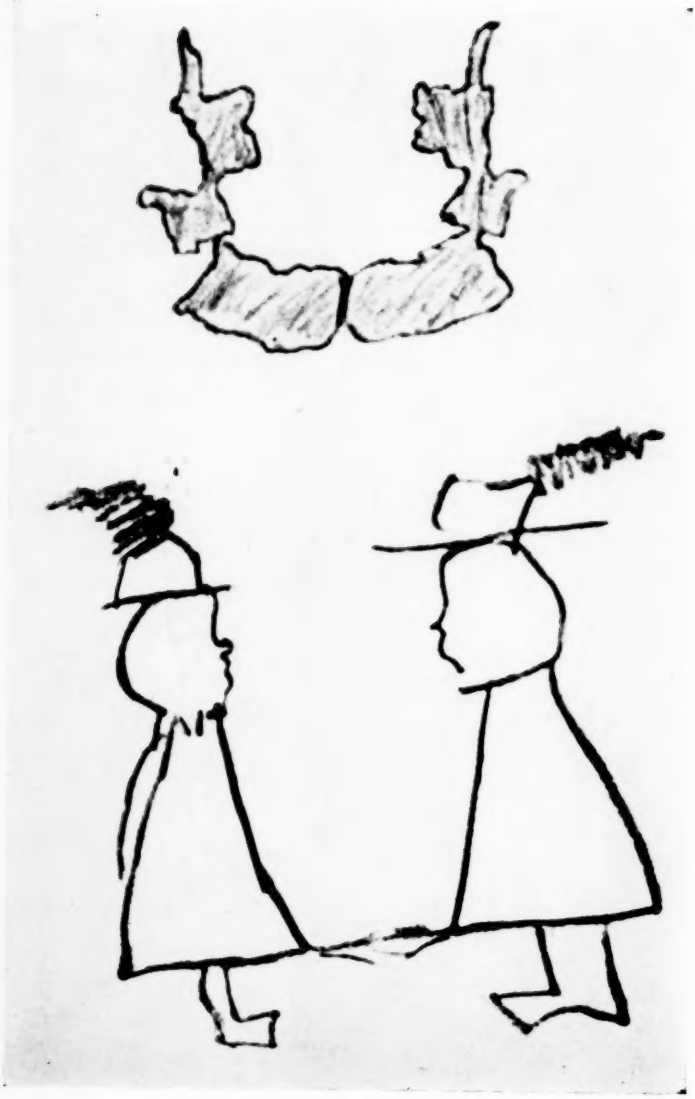


Figure 2

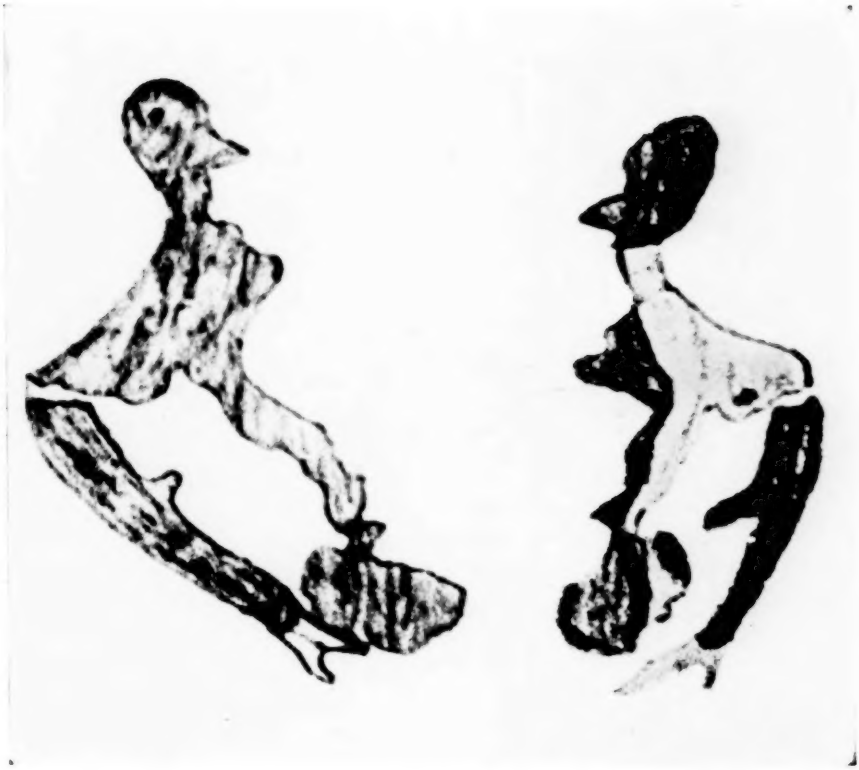


Figure 3

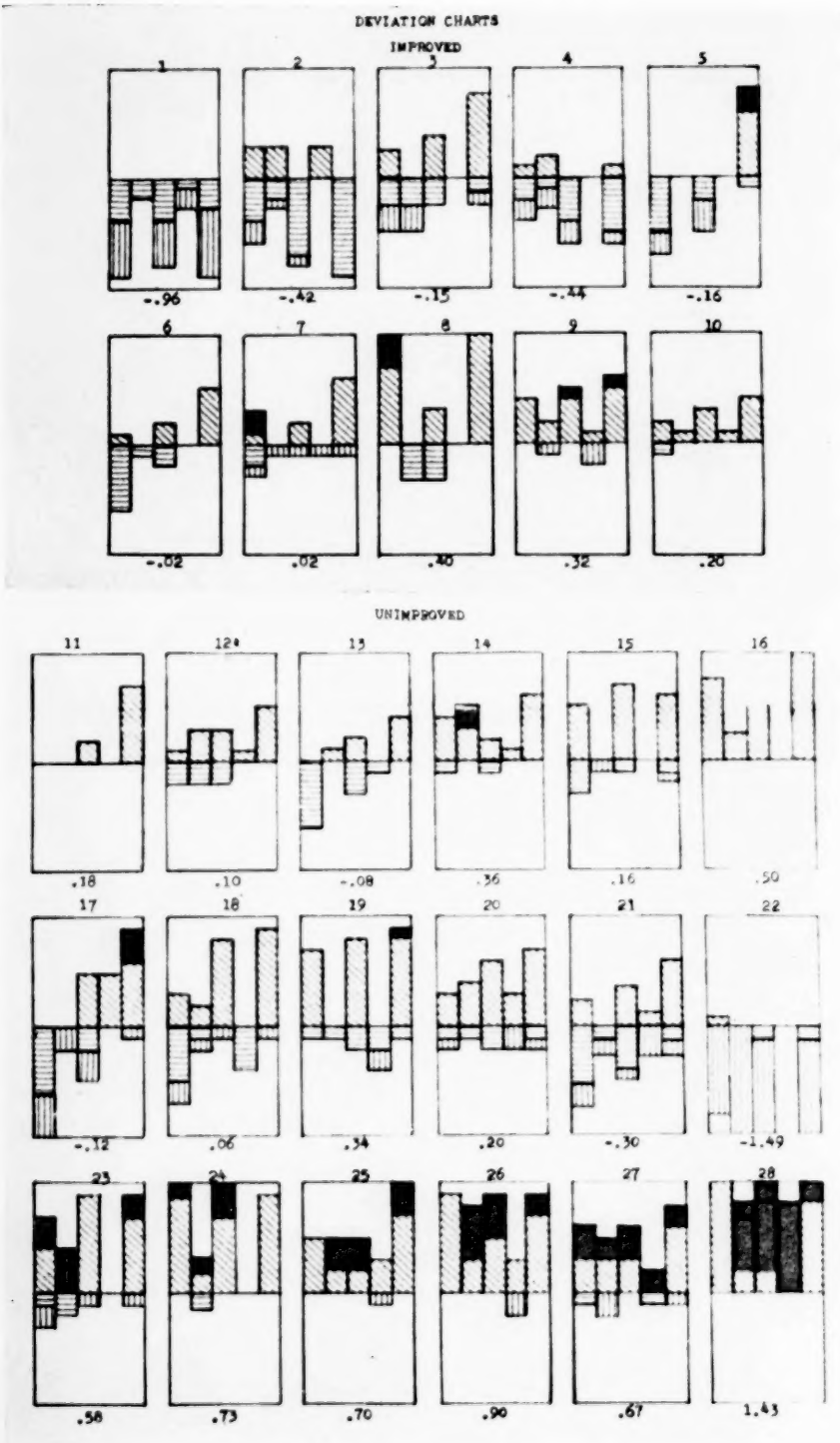

DEVIATION CHARTS
IMPROVED
1
2
3
4
5
-.96
-.42
-.15
-.44
-.16
6
7
8
9
10
-.02
.02
.40
.32
.20
UNIMPROVED
11
12
13
14
15
16
.18
.10
-.08
.36
.16
.50
17
18
19
20
21
22
-.12
.06
.34
.20
-.30
-1.49
23
24
25
26
27
28
.58
.73
.70
.90
.67
1.43

Figure 4

Area B: Utilization of total blot.

*1 Schizophrenic has over 50% "4's" and "5's"
*3 Schizophrenics have over 50% "1's" and "2's"
Total amount of deviation is not significant.

Area C: Modification.

*4 Schizophrenics have over 50% "4's" and "5's"
9 Schizophrenics have over 50% "1's" and "2's"
*24 Schizophrenics have over 40% total deviation.

Area D: Color.

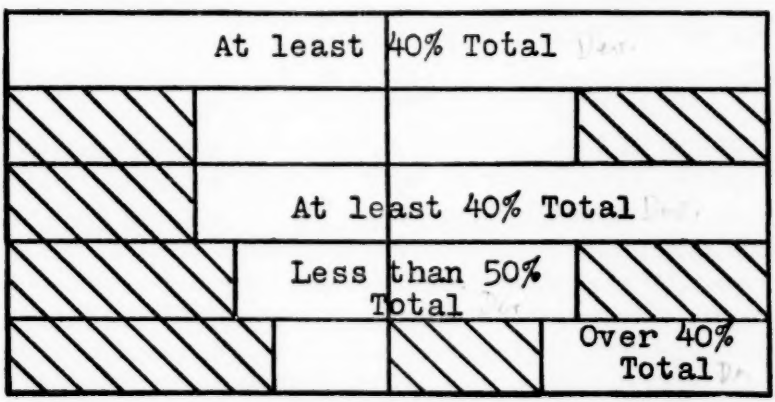
*No schizophrenic has over 40% "4's" and "5's"
*1 Schoziphrenic has over 50% "1's" and "2's"
*27 Schizophrenics have less than 50% total deviation.

Area E: Additions.

*24 Schizophrenics have less than 30% "4's" and "5's"
*24 Schizophrenics have more than 40% "1's" and "2's"
*All schizophrenics have over 40 per cent total deviation.

On the basis of the notations which seem to represent significant trends, a typical schizophrenic deviation pattern can be derived, the shaded-in areas representing amounts of deviation which the schizophrenic is unlikely to manifest. Obviously each patient will not fit this pattern exactly, but it can be considered common for the group here studied. (See Figure 5.)

Figure 5. Composite Schizophrenic Deviation Chart



With respect to inclusion of details, there is no outstanding direction of trend, but over 40 per cent total deviation occurs in most cases. Excessive deviation in utilization of the total blot is a rare occurrence. Lack of balance between blot and concept with reference to modification usually exceeds 40 per cent, but there is likely to be dominance of concept in half or less of the total productions. Excessive deviation with respect to color almost never occurs. A high amount of deviation (at least 40 per cent) with regard to additions, is the general rule, with a minority of instances of predominant concept, and more than 40 per cent occurrence of blot-dominance. Thus, in summary, schizophrenic productions are characterized by much deviation in Areas A, C, and E with less deviation in B and D, by absence of excessive concept dominance in all areas but A, and by predominant blot-dominance in Area E.

Of greater importance, however, is the differentiation between the various response patterns occurring within the experimental group. In Figure 4, the deviation patterns have been conveniently separated into two groups: 10 patients whose psychotic symptoms have disappeared since the time of examination, so that they may be considered to be in a remission period; and 18 patients whose condition has shown no essential change. Analysis of the deviation patterns revealed that a prognostic standard could be established which applied, with a rather high degree of accuracy. The standard for good prognosis is as follows: In at least 35 per cent of his responses, an individual must achieve a well-adjusted balance between blot and concept (at least 35 per cent of "3" ratings); and his deviation toward blot-dominance must not overweigh concept-dominance in a blot-concept quotient of + .10 or more. Using this standard, 21 members of the group had a poor prognostic score and 17 of these 21 did not improve; seven had a good prognostic score, and of these all but one did improve; or to state the same facts in another way—of the 18 unimproved patients, the failure to improve could have been correctly predicted in all but one case. Of the 10 improved patients, improvement could have been correctly predicted in six out of 10 cases. These data treated by the Chi-square method indicate that such results could have been achieved by chance only once in 100 times.

The lower section of Figure 4, illustrating the deviation charts of those patients who failed to improve, has been grouped according to different types of pattern. The upper row contains deviation charts which barely exceed the standard of total deviation, but in which blot-concept quotients are too heavily weighted by blot-dominance. In the second row, the charts are characterized by excessive total deviation. The third row represents a specific subgroup analogous to the first row; these charts contain a much larger number of "1" ratings than any others—a sign which by itself seems to be an indication of poor prognosis.

The next sphere of investigation dealt with the relation between clinical symptoms and graphic Rorschach responses. In Table 1, there has been indicated the presence or absence of hallucinatory and delusional phenomena. An interesting observation was made that of the 13 patients whose deviation charts indicate the presence of "1" ratings (the presence of black areas in the charts), 12 had hallucinations. The relationship did not seem to be so close in the remainder of the group. Of the 15 patients whose deviation charts had no "1" ratings, six also had hallucinations. In other words, "1" ratings seem to be found almost without exception in the presence of hallucinations, but hallucinations may also occur in conjunction with other types of graphic productions, although to a lesser degree. The observed relationship was proved by the Chi-square method to be one which might occur purely by chance in less than one in 100 instances.

It was found, however, that there was no observable relationship between any graphic Rorschach feature and the occurrence of delusions.

## Discussion

It will be noted that, on the basis of the data given, it has been possible to establish a composite deviation pattern of the separate features most frequently found in the productions of this group of schizophrenic patients. It has already been stressed, however, that all individuals cannot be expected to conform to pattern entirely. The wide scope of variation manifested by the many types of disorder bearing this common diagnosis has been obvious to all workers both from the clinical and Rorschach approaches. Klopfer and

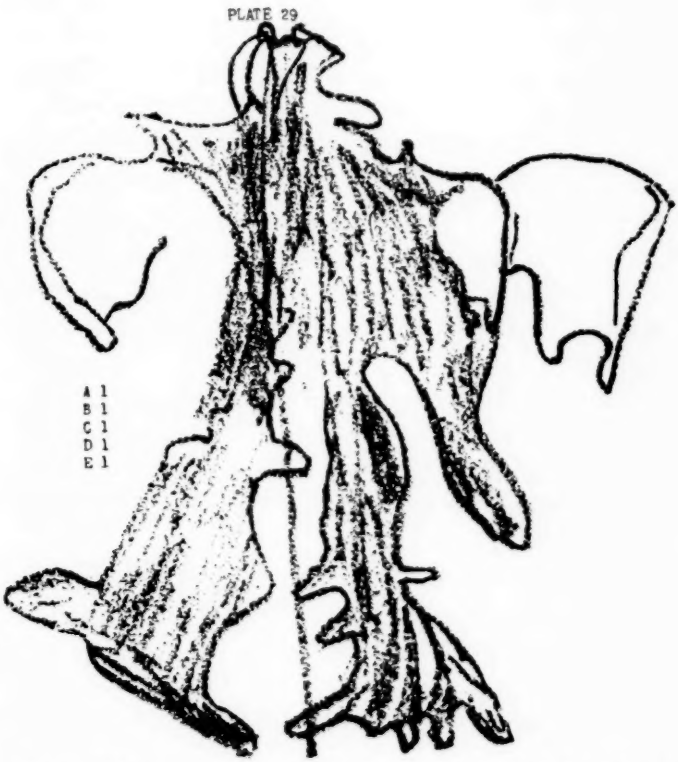
Kelley state this problem as follows: "It must first be strongly emphasized that there is no single definite Rorschach or personality picture typical of schizophrenia as a whole . . . Pure and unmixed clinical schizophrenic entities are rare . . . Inasmuch as schizophrenia is but a syndrome—a name given to certain groups of patients who may show widely varying behavior complexes—it is too much to expect that any known method of investigation, if applied indiscriminately to all the members of the group, ever show any definite results." (Ref. 4, p. 35.)

The prognostic criteria which have been established are of some interest in that they deal with spontaneous disappearance of symptoms under ordinary hospital care without complicating use of drug or shock therapies. (Only two members of the entire group had a short series of electric shock treatments, both without essential change clinically; in both instances, examination preceded treatment.) It has been felt that the numerous attempts to establish criteria for favorable response to drug or shock therapies might perhaps apply also to spontaneous remissions; but little effort has been directed toward substantiating this hypothesis. Whether the present criteria could be applied to predictions of the outcome of various special therapies would have to be experimentally determined. Since administrative difficulties usually make it possible for only a small percentage of any hospital population to receive specific treatment, the present results in predicting outcome under routine care, with a fairly high degree of accuracy, seem to have greater practical value.

By the established criteria, those individuals who fail to achieve a balance between blot and concept in at least 35 per cent of their ratings, and whose deviation is overweighted in the direction of blot-dominance, have a poor prognosis. At this point, distinction must be made between the blot-dominance of a schizophrenic disturbance and a more extreme and extensive form of blot-dominance which has been described in patients with organic pathology. In the former instances, there may be a large number of blot-dominated responses; but the extremes of blot-dominance ("1's") never outnumber the less extreme forms. In the organic record, the blot-dominated responses are rarely if ever accompanied by instances of concept-dominance, and "1" ratings take precedence

over all other forms of response. In more concrete terms, this distinction is expressed in the drawings in the following manner. The organic patient displays an intense effort to reproduce the blot detail by detail, and in so doing devotes excessive amounts of time to each production; asymmetry and spatial disorientation almost always appear because of the patient's inability to combine his detail-interest with preservation of the part-whole relationship. A

Figure 6




common form of organic drawing is reproduced in Figure 6. Its contrast with the previously illustrated blot-dominated responses is obvious. The blot-dominated schizophrenic makes his response rather rapidly, can be induced to alter or omit minor details, although he rarely does so spontaneously, expresses no concern for accurate reproduction, and is usually able to maintain the symmetry and spatial relationships of the blots to which he responds.

The import of these observations, with reference to blot-dominance as a manifestation of impaired capacity for abstraction, has been discussed.[4] The similarity of performance of organic and schizophrenic patients in the well-known battery of "sorting tests" has been frequently described. In the present method, this similarity has also been demonstrated; but the distinction in degree of deviation appears to be clearer than was found by the use of other methods. The deviation of some schizophrenic patients, therefore, is in the same direction as the altered performance of patients with organic pathology; but there is a line of demarcation in terms of degree which has not failed to distinguish the two in any instance yet observed.

## Conclusions

1. The graphic Rorschach technique was applied to 28 mental hospital patients diagnosed as schizophrenic. Certain features of performance were found to be common to a large percentage of the group and a "composite schizophrenic deviation pattern" was described.

2. Criteria for good prognosis were isolated which indicated outcome correctly in 23 out of 28 cases. The standard for good prognosis was at least 35 per cent of "3" ratings, and dominance of blot over concept no greater than a blot-concept quotient of + .10.

3. The presence of "1" ratings was associated with the presence of hallucinations in 12 out of 13 cases. A small number of other patients also had hallucinations.

4. There was no observable relationship between the presence of delusional ideas and any feature of the graphic Rorschach performance.

5. There was no observable relationship between the presence of any single schizophrenic sign or constellation of signs in the verbal Rorschach record and any feature of the graphic Rorschach performance.

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# WARD THERAPY--A NEW METHOD OF GROUP PSYCHOTHERAPY

BY NATHAN BLACKMAN, M. D.*

## Introduction

Group psychotherapy has been described in recent literature by Lozell,[1] Wender,[2] Hackfield,[3] Gabriel,[4] Schilder,[5] Harris[6] and Altshuler.[7] A fairly constant component of the methods described has been a more or less formal application of a therapeutic discipline to the group situation. Although enthusiastically championed by the various authors, this form of therapy has not become so popular and widespread in its application as its value would have warranted. The limited application of group therapy methods in mental institutions might have been due in part to the formalistic approach with which group psychotherapy was endowed from its very beginning. In a recent attempt at group treatment of schizophrenic patients, the author[8] has described a method of indirect stimulation of a number of patients residing on the same ward. The favorable result obtained served as a stimulus for the application of a more direct method of reorientation of patients by means of meetings on the wards at which mental health problems were discussed.

The social difficulties which so often precede the onset of mental illness are due in part to an exaggeration of introspective thinking. The patient may be analyzing minutely the significance of each act and gesture, ruminating over the meaning of every statement and setting in which he finds himself involved. He may, thus, rapidly reach a state of heightened irritability where the constant clashing of the various impulses received causes a degree of instability difficult, and often impossible, to contain within oneself. No wonder that the patient, having resorted to a psychosis in order to escape from this turbulent form of thinking, having finally succeeded in projecting some of these thoughts on the hostile environment, is reluctant to reconstruct the same painful trend of ideas during the psychotherapeutic interviews. The patient, having solved his trau-

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matic life experiences by means of the psychosis, balks at attempts to shatter this stabilizing level. The "lack of insight" by the patient becomes his defense-shield. The conscious levels in the individual do not allow the submerged, split-off components to reappear into consciousness.

Normal thinking might be described as a state of equilibrium in which the various levels of life experiences are functioning harmoniously. The psychotic individual is the one in whom a definite sphere of life experiences has become blocked and unavailable for the use of the total personality. The reconstruction of these submerged life experiences is unwelcome to the conscious strata of the individual. The acceptance of the causative source or etiology is extremely difficult, if not actually dangerous, to the very life instincts of the patient. In psychotherapy, the physician has two alternatives, both beset with definite hazards. He may either employ direct probing, which is difficult and frequently unacceptable to the patient, or else the opposite, namely, the glossing over of the salient personality deviations, with the dangers of perpetuating the very traits which incapacitate the patient.

The creation of an atmosphere in which therapeutic postulates are discussed on a less personal and more objective basis minimizes the acute threat which would otherwise be felt by the patient. The poignancy and directness of a self-analysis is not operative when the discussion centers not on one's self but on another member of the group. The most intimate problems lose much of their introspectively magnified implications when uttered in the presence of a group which calmly proceeds to discuss these problems. The atmosphere of realism gives even the shy individual an opportunity to relinquish parts of his psychotic content while participating in the group discussion. A transition, a painless means of shedding the most salient features of the psychosis, is afforded by this collective means of group participation.

It is not unusual to find an alert, conscientious staff spending a good part of its time at meetings. Though these staff meetings do often clarify a psychiatric problem and bring out the psychodynamic implications of a case, the eventual benefit to the patient is still problematical. The patient is frequently mystified as to the purpose of these meetings. He grooms himself for them. He is decid-

edly on the defensive throughout the staff interview and often considers himself being judged by a hostile group. This is especially true of a good number of patients who think that they are detained in the hospital unjustly. (One must admit that there exists an attitude of the patient toward the physician which, perhaps an historically justifiable one, is still repugnant to the physician. This attitude of regarding the physician as the "jailor" is a deeply rooted one and is often strengthened by notions prevalent in the community. Little attempt has ever been made to make a clear-cut distinction between the physician-therapist and physician-administrator; Morse and Noble[9] summarize briefly what has been done in this respect.) Many a patient maintains a certain suspiciousness and lack of frankness toward the hospital personnel throughout his stay in the hospital. He often remains ignorant of the evaluation of his case at the staff meeting, and feels that his version never did get a sympathetic hearing.

## Methods

The entire ward population sits with the therapist, and a friendly discussion is gradually started. The meetings are begun with a short statement by the therapist, explaining the functioning and purpose of the hospital, its rôle in promoting cures, its interest in understanding mental illnesses and aberrant forms of behavior. (This was found to be particularly important when patients came from communities where mental hygiene ideas are practically nonexistant.) The group, consisting of the ward population, is unselected. The more alert patients usually start the discussion. This allows the more withdrawn individuals to fall in line gradually. The case of any one of the members of the group may be chosen for discussion. A short history of the case, including the salient features of the patient's conduct, is outlined by the therapist, and the group is asked to evaluate and comment on the patient's condition. The patient is encouraged to present his side of his past and present behavior and is prompted to elaborate on the thought content and ideas that he entertains. The group discusses in detail the behavior of the patient, his life story, the reasons for his illness; and the therapist adds his comment, singling out and underlining statements or ideas uttered by the participants in the discussion and merely enlarging on these statements.

The basic idea of these sessions is that the patient be allowed full freedom of expression, that he be taken quite seriously and be treated as an equal with due consideration for his opinions and statements. The mere exchange of ideas, the fact that the patient's life problems are discussed in words that he can grasp and in the presence of a group with which he is intimate, allows for a free interchange of comments and the airing of ideas and prejudices, scruples and ambitions.

Although discussions of case histories were most frequent, the group would at times deviate from this procedure. Patients might suggest topics of interest to them for discussion by the group. Such items as masturbation, early trauma, the rôle of the parents, the importance of various professions, problems of general adjustment and physical health may all be brought up and discussed at these meetings. The therapist then acts more in the capacity of a moderator, asking the members of the group for their individual comments, enlarging upon and summarizing the opinions of the group, while interjecting expressions or ideas of his own.

Not infrequently, a patient, particularly a paranoid one, may urge the group to have his case discussed. At times, members of the group assume leadership, question the patient in detail, check up on his statements and comment as to the veracity of the ideas exposed. The consensus of the group, even when unfavorable for the patient, was easier and more readily acceptable to the patient than would have been a similar comment by the therapist. Individual requests and problems of adjustment in the hospital might be discussed or, even more frequently, taken up following the meeting. The reasons for not complying with some of these requests would also be given at the meetings and discussed by the group.

Similar ward sessions were held on wards where the greatest number of the patients were chronic alcoholics committed to the hospital for definite periods. It was not unusual to find a neurotic individual airing his problems of adjustment, while at other times "Alcoholics Anonymous" principles would be discussed and morale-building ideas stressed. The more promising individuals among this group of chronic alcoholics might be singled out for individual therapy whenever this was possible.

Ward sessions with female patients, although essentially similar to the meetings held with the male groups, lacked in spontaneity and animation. The somewhat greater age of the hospital's female group and the lack of comparatively intact patients among them may perhaps explain this difference in tenor and group affinity. To overcome a certain amount of diffidence and uncertainty during the discussions, it was found helpful to review in advance the more important psychodynamic factors of the case to be discussed. This allowed for more direct questioning, less hit or miss fumbling, and helped to sustain the interest of the group. The leadership of the group meetings would be entrusted whenever possible to the hands of a patient who would preside and call for comments from either patients or therapist, thus further stressing the passive rôle of the therapist during these sessions and his absolute equality within the group.

## Results

It is impossible to evaluate the results of group psychotherapeutic methods in a short interval. At best, the evaluation of their efficacy would be subjective. The degree of spontaneity, cooperativeness and willingness of the group to participate actively in the discussion is perhaps as good a criterion of its value as anything else one may have. A frequent, and by no means negligible, corollary of these sessions was the opportunity for individual followup which resulted from more intimate familiarity with the patient. Personal request, individual queries and desires for early advancement or change of status in the hospital were received on terms of equality and were acted upon in a spirit of mutual understanding and trust.

In many a hospital, the initiative for eventual parole from the institution is not originated by the physician or by the patient. The progress of the individual patient is not so closely followed as it might be. The patient's complete adaptation to hospital routine may sometimes result in eventual neglect as far as early release from the hospital is concerned. The useful patient may be assigned, with or without the connivance of the ward attendant, to duties that keep him out of sight of the physician for varying periods. Thus a patient, even improved, may continue to reside in

the hospital only because he has adapted too well to a particular routine. Through the ward sessions, these patients are encouraged to assert themselves; their improvement comes more readily to the attention of the physician; and the eventual social adjustment is worked out sooner.

These ward sessions allow the nurses and attendants to learn to understand their patients better. The grasp of the patient gained by the physician at staff conferences becomes, to a somewhat lesser degree, available to the attendant as he sits by and shares in the evaluation of the patient's personal problems. This intimacy of the attendant with the problems of his charges has always been stressed as essential for good psychiatric nursing. At present, it is even more important than usual that the ward attendant should learn to know and understand the patient. Plans for eventual readaptation or readjustment of the patient rely to a great extent on the understanding and intelligent appreciation of the patient by his ward employees. The time spent by the physician on the ward is necessarily limited, and it is extremely important for those who are with the patients during 24 hours of the day to be aware of the problems and history of each case.

## Discussion

The friendly, easy-going, yet earnest attitude during these group sessions was a calculated one. The basic purpose of the meetings was to maintain an attitude of mutual helpfulness, an attitude of virile criticism in discussing simple and essential values of mental and social behavior. At the meetings, the patients often led the discussion, judged themselves or others and expressed their opinions freely. The therapist, participating in these discussions, shed his administrative prerogatives to a considerable extent. However, the mere lack of a formal cohesiveness did not mean that these meetings were run without a plan. The study of personality structure and a free discussion of the case histories enriched the patient's conception of his own problems. This permitted the patient the mastery of an objective approach to his problems instead of the all-too-introspective relationship which usually exists between the patient and the therapist. Problems of conduct ceased to carry

a secret or hidden meaning to the patient. His problems would become understandable and socially acceptable merely by the fact that they had been discussed at the group session.

The psychotic individual comes frequently from an environment in which prejudices and biases concerning mental illnesses are firmly entrenched. Is it any wonder that the patient also accepts the dominant opinions rampant in his environment and believes that he is being punished in the hospital for acts, real or unreal, that he thinks he has committed? The group sessions educate the patient to shatter these superficial barriers to an acceptable degree of socialization. A setting is provided where the patient finds it possible to reevaluate his concepts. He is encouraged to reset his tumultuous ways of thinking to more stable proportions, more easily adapted to his personality makeup. The "queer," abnormal patterns of behavior may perhaps not be reset; but an outlet for reidentification with a social group is provided. The breaking up of ultrasubjective attitudes toward mental conflicts provides an opportunity for ultimate stabilization.

This form of group therapy results in a more intimate relationship between the physician and large groups of patients. Faced with an increasing shortage of hospital personnel, the only means of coping with the ever-growing problems of maintaining adequate therapeutic standards must imply the abandoning of certain prerogatives by the physician and the willingness to adapt himself to new conditions. The ward sessions encourage the psychiatrist to participate more intimately in the lives and problems of the patients while devoting less time to "armchair" meditation.

This group therapy method may be one of necessity rather than choice. But it does provide a means of maintaining therapeutic levels and encouraging hospital and ward morale, while requiring only a minimum of psychiatric guidance. As the levels of existence throughout the nation continue to decline, a vigorous readaptation will be in order to maintain therapeutic goals. The reconsecration of the physician to the "bedside" on a group scale, the abandoning of the staff room in favor of ward groups is offered as a partial solution to some of the problems imposed upon us by the growing war emergencies.

## Summary

A method of group psychotherapy is described which, while maintaining the essential requisites of passive guidance by the therapist and active participation by the patient, obviates the patient's resistance to therapy and allows for increased opportunities for mass-catharsis. The atmosphere of impartiality during these friendly, instructive discussions, and the method of case presentations on the wards are described. The physician is encouraged to participate more intimately in the lives of large groups of patients. Psychotherapy becomes meaningful and within the reach of both patients and ward personnel. This method of ward therapy is presented as a means of utilizing available psychiatric guidance in the face of the ever-increasing scarcity of medical personnel.


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# PROGNOSIS OF CARBON MONOXIDE POISONING IN 15 PATIENTS, PREVIOUSLY MENTALLY ILL

BY ROBERT J. VAN AMBERG, M. D.

Carbon monoxide poisoning is a problem important to psychiatrists inasmuch as illuminating gas or motor exhaust gas is frequently used in suicide attempts by mentally ill persons and by others who subsequently require institutional care. The neurological and psychiatric manifestations of carbon monoxide intoxication have been most adequately described. However, there have been but few studies made to determine the course of these organic changes. Such a study is prompted by the lack of tangible clinical material needed both for accurate prognostication and for certain medico-legal problems.

The case material to be presented consists of 15 patients who were suffering from so-called functional behavior disorders prior to unsuccessful suicide attempts by illuminating gas or motor exhaust gas. To the original clinical pictures were added the organic neurological changes and the organic psychological disturbances, notably defects in the sensorium. It is likely that the manifestations of definite involvement of the central nervous system are independent of the previously existing mental states, which now constitute the background. Therefore, the course of the effects of carbon monoxide intoxication in these patients probably follows very closely the course of the carbon monoxide changes in otherwise healthy persons.

In briefly reviewing the physiology and pathology of carbon monoxide poisoning it is to be pointed out that the generally accepted effect of carbon monoxide on the organism is that of asphyxia and not that of a specific nervous tissue toxin. The supporting evidence holds that carbon monoxide has an affinity for hemoglobin 210 times that of oxygen. After a sufficiently high concentration of carboxyhemoglobin has been attained, anoxemia and respiratory failure are thought to result. Pathological changes in the central nervous system can well be interpreted as evidence of asphyxia. Dogs maintained in atmospheres deficient in oxygen showed lesions in the brain very similar to those produced by car-

bon monoxide poisoning (Yant[1]). There is no evidence that exposure to small amounts of carbon monoxide (non-asphyxiating amounts) causes any damage.[2]

Some, however, dispute the contention that the effect of gas poisoning is exclusively that of asphyxia. It is to be noted (R. M. Stewart[3]) that a patient poisoned by illuminating gas has no dyspnea. Breathing is quite normal, and the respiratory center seems not to respond to oxygen want. Further, death may occur where carbon monoxide blood saturation is 50 per cent, or even 30 per cent. Haggard[4] grew hanging drop cultures of chick neuroblastic tissues in an atmosphere of 79 per cent carbon monoxide, and found the rate and quality of growth unaffected. But when 0.1 per cent of illuminating gas was used, death invariably resulted. Wolff[5] was impressed with this evidence and drew attention to the direct toxicity of elements in illuminating gas, contrasting it to pure carbon monoxide.

The pathological changes of the nervous system brought about by gas poisoning reflect an altered function of the vascular system.[6] Impairment of vessel endothelium, with or without thrombosis, is associated with the other pathological changes: hyperemia, edema, hemorrhage, diffuse nervous system degeneration which is especially marked in the lenticular nuclei, cortex and dorsal vagus nucleus. The damage is widespread in those cases studied at autopsy and is notably greater in those cases with previous arteriosclerotic vessel changes.

In view of the diffuse effect carbon monoxide poisoning has on the central and peripheral nervous system, and of the complicating effect the state of the patient's vessels may have on the ultimate clinical picture, the great variety of neurological and psychological changes noted in case reports is not surprising. The more common symptoms and signs seen in acute cases are loss of consciousness followed by a delirious state; headache, dizziness, nausea and vomiting (all probably caused by cerebral edema); irritability, lack of concentration, increased fatigability. These tend to be transient. Neurological and sensorium changes include paralyses, speech disturbances, tremors, analgesias, loss of memory and Parkinsonism, and various psychoses. These last-mentioned manifestations are usually considered to be permanent organic changes.

Until rather recently, writers have been very indefinite about the course of patients who have shown serious changes. A comment is usually made that patients poisoned by carbon monoxide may either die, completely recover, or show permanent organic changes; or a discussion of the prognosis of these cases is limited to an indefinite statement to the effect that once chronic symptoms have appeared the outlook is poor. Apart from Kraepelin's important observation that chronic symptoms (delirium and excitement) may occur after one to three weeks of apparent recovery, there is available little concrete clinical material on which to base a prognostication in a given case of carbon monoxide intoxication.

Rossiter,[7] in 1928, made an important study to determine the incidence and duration of serious sequelae after carbon monoxide poisoning. Of 2,000 cases, four had neurological and psychiatric changes in addition to the usual transient headache and weakness. Three of these four patients recovered completely in two weeks; the remaining one had a permanent psychosis. In view of the apparent rarity of significant sequelae to carbon monoxide poisoning, Shillito, Drinker and Shaughnessy,[8] in 1936, gathered data on 21,000 acute cases in New York City. One-third of these died without regaining consciousness. Of the surviving 14,000, 43 (1:325) showed nervous and mental symptoms requiring hospitalization. All 43 had been unconscious and required an average of 66 minutes before normal breathing was established. Eleven, whose average age was 61, died of bronchopneumonia within two years. Twenty-three recovered. Some had psychoses marked by bewilderment and amnesia lasting from a few weeks to eight months. Memory defects were the last to clear. Nine appeared permanently affected after two years. The manifestations noted in this last group were Parkinsonism, muscular hypertonia, psychoses, auditory aphasia.

Of a number of isolated cases reported in the literature several are of especial interest. Henderson and Gillespie[9] mention a patient unconscious 24 hours after inhaling illuminating gas, who developed chronic sensorium impairment lasting at least five years. Hitchcock[10] treated a patient, unconscious five or six hours from motor exhaust gas, who recovered in six weeks. Sanger and Gilliland[11] treated a 27-year-old man who was found in a car beside a

companion already dead from carbon monoxide poisoning. The patient was in coma three days, regained consciousness completely 13 days later, and was apparently completely recovered in one year. Another 27-year-old man who had been unconscious five days following illuminating gas intoxication developed a severe permanent Parkinsonism (MacKay[12]). Rodgers[12] noted permanent defects in memory in two patients following coal gas and illuminating gas intoxication. One was unconscious two weeks, and the other, one and one-half days.

Studies so far, then, indicate that of 325 persons who inhale illuminating gas or motor exhaust in significant amounts and survive, only one develops serious sequelae. Of the persons with sequelae about one-quarter are permanently affected, while three-quarters recover in a few weeks to eight months. Apparently some patients unconscious for several days may recover completely while others in the same age group may have permanent effects after but 24 hours of unconsciousness. This extreme variability in the courses of intoxicated patients makes prognosis of a given case highly uncertain, though we may know what the statistical chances for complete or partial recovery are.

The records of 15 patients who had attempted suicide by illuminating gas or motor exhaust gas were studied to determine the factors, if any, that might indicate or influence the course of the toxic changes. The patients received care at New York Hospital—Westchester Division, in the 12-year period of 1929 through 1940. All patients had personality disorders at the time of their suicide attempts. Five were classified as manic-depressive psychoses, depressive type (average age 37); five were classified as psychoneuroses (average age 43); two as involutional psychoses, melancholia (average age 54); one as psychosis with cerebral arteriosclerosis; one as psychosis with psychopathic personality; and one as dementia præcox, paranoid type. One patient survived three serious exposures to illuminating gas. All others survived one attempt, though several have subsequently committed suicide by gas or some other means. The method of choice was illuminating gas in 11 of the 17 instances, and motor exhaust gas in the other six.

For this study, the patients were listed in order of the duration of unconsciousness following removal from the toxic atmosphere.

CARBON MONOXIDE POISONING IN 15 PATIENTS, PREVIOUSLY MENTALLY ILL

| Case No. | Sex | Age | Diagnosis | Gas | Time unconsc. | Treated | Early effects | Late effects |
|---|---|---|---|---|---|---|---|---|
| 1. | F | 35 | Manic-depressive, depressed | Illum. | 0 | 0 | 0 | 0 |
| 2. | M | 39 | Psychoneurosis, depression | Illum. | 0 | 0 | 0 | 0 |
| 3. | F | 40 | Dementia præcox, paranoid | Illum. | 0 | 0 | 0 | 0 |
| 4a. | F | 47 | Psychoneurosis, depression | Illum. | 0 | 0 | 0 | 0 |
| 5. | M | 47 | Psychosis with psychopathic personality | Motor | 10 min. | Oxygen 15 min. | 0 | 0 |
| 6. | F | 45 | Psychoneurosis, depression | Motor | 15 min. | 0 | 0 | 0 |
| 7. | F | 60 | Involutional melancholia | Illum. | 15 min. | 0 | 0 | 0 |
| 8. | F | 47 | Manic-depressive, mixed type | Motor | 30 min. | Pulmotor | 0 | 0 |
| 4b. | F | 47 | Psychoneurosis, depression | Illum. | 30 min. | 0 | Memory defects for events surrounding episode | No defects after 2 weeks |
| 4c. | .. | .. | ..... | Illum. | 20 min. | Pulmotor | Memory defects marked; confabulation | Recovery in 2½ mos., except for slight memory defect |
| 9. | M | 48 | Involutional melancholia | Motor | 50 min. | $O_2+CO_2$ ↑ time | Apathetic; tremor left leg | Recovery in 1 week |
| 10. | F | 68 | Psychosis with cerebral arteriosclerosis | Illum. | 1 hr. | Pulmotor 1 hr. | Thick speech; poor recall; memory otherwise good | Completely recovered in 5 mos. |
| 11. | F | 33 | Manic-depressive, depressed | Illum. | 3 hrs. | Oxygen 2 hrs. | Sensorium shattered; Parkinsonism in 2 mos. | Some improvement in sensorium in 3 mos.; none further |
| 12. | F | 33 | Psychoneurosis, hysteria | Motor | 5½ hrs. | Oxygen ↑ time | Athetosis, slurred speech, aphasia | 6 mos.: Partial disorientation; poor memory<br>8 yrs.: Marked Parkinsonism |
| 13. | M | 51 | Psychoneurosis, mixed type | Illum. | 6 hrs. | Inhalator 3 hrs. | Dizzy, broad base for 1 week | Recovered in 2 weeks |
| 14. | M | 42 | Manic-depressive, depressed | Motor | 8 hrs. | Oxygen 4-6 hrs. | Sensorium shattered | 3 mos.: Partial recovery<br>1 yr.: Marked improvement;<br>3 yrs.: Slight defect |
| 15. | F | 31 | Manic-depressive, depressed | Illum. | 10 days | Oxygen 1½ hrs. | Two transfusions—sensorium shattered; Parkinsonism | 1½ mos.: Only masked facies remained; 2 mos.: Recovered |

(See table.) In no case was it possible to determine reasonably accurately the time of exposure or the probable concentration of the gas. No mention of the presence or absence of apnea is made in the histories. Dyspnea was not mentioned. Cyanosis, curiously enough, was described in case 11. All patients experienced the immediate but transient symptoms of confusion, nausea, headache, weakness. These effects will not be considered further, but attention will be directed to sensorium and neurological changes of more than 24 hours duration.

The first four patients were exposed to illuminating gas sufficiently to develop acute symptoms, but not unconsciousness. None had sensorium or neurological changes. No changes were noted in the next four persons, although they had been unconscious 10 to 30 minutes. Two had received artificial respiration and nasal oxygen, but the other two received no specific treatment. An interesting case to speculate upon is the patient (4a, 4b, 4c) who made three unsuccessful attempts with illuminating gas. There were no changes in personality, sensorium or neurological status following the first attempt. There had been no loss of consciousness. But the second attempt, one month later, brought a period of unconsciousness that was not longer than 30 minutes. The patient's memory was impaired for events associated with the episode, but was almost completely recovered in a few days. Fifteen days later the third attempt resulted in about 20 minutes loss of consciousness with a greatly increased memory defect, confabulation and some difficulty in walking. Recovery was rapid, but in two and one-half months there was still a residue of memory impairment involving ages and dates. It appears that the summation of three relatively mild intoxications, at least two weeks apart, had produced changes that would not, in all probability, be the result of a single intoxication. Another factor may complicate the pathology; for the history indefinitely indicates a cerebral birth injury with few, if any, signs at the time.

Two patients (Cases 9 and 10) were unconscious about one hour and recovered completely after rather marked general symptoms and transient localized signs. One, a 48-year-old man was restored to consciousness 50 minutes after being removed from a garage and treated with oxygen and carbon dioxide. A tremor of the left leg

and general apathy passed in one week. There have been no signs or symptoms in the five subsequent years. The other patient, a 68-year-old woman who took illuminating gas and was roused to consciousness at the end of one hour with the assistance of a pulmotor, was classified as psychosis with cerebral arteriosclerosis. She recovered in five months from her psychosis as well as from the inconveniences of a thick speech and inability to retain and recall. Her memory and orientation were good at all times. It is possible that the pathological manifestations were those of cerebral arteriosclerosis, and that the intoxication had no appreciable effect after the first few days.

Four persons who demonstrated marked and prolonged pathological changes were unconscious from three to eight hours. Still another was unconscious as long as 10 days. In this group of five, there is apparently no correlation between the duration of unconsciousness and the severity and duration of signs and symptoms. A 33-year-old woman (Case 11, see following abstract) who received oxygen treatment for two hours and regained consciousness one hour later showed severe sensorium defects (partial orientation, fair memory for remote events, anterograde amnesia), confusion. Lenticular nuclei pathological changes developed in two months; there was some sensorium improvement in the third month, but no further change occurred in the subsequent nine months. While this patient had used illuminating gas, another woman, also 33, attempted suicide with motor exhaust gas and was revived with the aid of oxygen in five and one-half hours. Her pathological manifestations consisted of athetoid movements, marked disorientation in time and place, and little involvement of memory. By six months, her sensorium appeared to be intact, but Parkinsonism was very prominent. This state has continued unaltered for eight years. A 51-year-old man who was treated with oxygen for three of the six hours he was unconscious from illuminating gas showed only dizziness and a walk with a broad base for one or two weeks. A 42-year-old male unconscious eight hours from motor exhaust gas intoxication, was treated in an oxygen tent most of that period. On regaining consciousness he demonstrated a shattered sensorium that improved markedly in three months; and after one year he suffered only with a memory defective for

names and dates, and occasional tantrums. There was no further improvement after three years. Most remarkable was a 31-year-old woman (Case 15) unconscious for 10 days, treated with pulmotor and blood transfusions, and showing a shattered sensorium and Parkinsonism a week or so later. In two months, her sensorium was completely intact and almost all pathological neurological manifestations were absent. An abstract of her case, and one of Case 11 for contrast purposes, are presented here.

### *Case* 15

Mrs. C. R. S., a 31-year-old married woman, became increasingly depressed through the summer of 1938, and attempted suicide by illuminating gas on September 1, 1938. Her forebears were Irish Catholic. Her mother, the only close relative who suffered a mental illness, experienced a prolonged menopausal depression. The sixth of seven siblings, the patient grew satisfactorily throughout childhood in stature, intellectually and socially. After several years at minor positions, she married at 20, adjusted well to her husband, and had a child when 22. On moving away from her relatives the next year, she had her first depression. She recovered in several months. When 26, she had her second child without serious consequences. She was an excellent housekeeper, quite active, but in contrast to her adolescent habits tended to be withdrawn socially. Relations with her husband were at times rather tense through disagreements on finances, social activities and the management of her mentally ill mother.

During the spring of 1938, the patient was overburdened by illnesses of her children. She herself developed measles, and a subsequent widespread dermatitis. By June, a depression began to develop. It became progressively more incapacitating; and on September 1, she was found unconscious on the kitchen floor, the room tightly closed and filled with illuminating gas. (It was assumed that she had been unconscious for three hours.) Withdrawn from that room the patient received pulmotor artificial respiration for one and one-half hours. On admission to a nearby hospital, a blood transfusion was given about two and one-half hours after the

termination of the artificial respiration. She was comatose; pupils were widely dilated and areflexic; there was moderate rigidity in all extremities. On September 5 there were elicited tonic neck signs, bilateral Babinski reflexes, *tache cérébrale*. Spinal fluid examination was within normal limits. On this day, she received a second blood transfusion. It was not until September 10 (10 days after admission) that the patient regained consciousness. Marked irritability and continuous irrational behavior made institutional care advisable. Admitted to New York Hospital—Westchester Division on September 15, she was unkempt, restless, required support in her unsteady gait. She spoke slowly, very thickly, and—contradicting herself frequently—demonstrated perplexity, confusion, disorientation, memory disturbances and severe impairment of other intellectual faculties. Neurologically she showed rigid posture, rigid facial muscles, hyperactive deep reflexes, bilateral Babinski, bilateral ankle clonus, and impaired position sense. She was incontinent of urine. Apart from a hemoglobin of 73 (red blood cells 3.8 million), laboratory and other physical findings were within normal limits. From the first day she showed signs of steady improvement, though she continued to be a difficult nursing problem. Vitamin B was administered intramuscularly. By October 7, the only positive neurological findings were a slight impairment in convergence, a slightly mask-like facies, and an increased resistance to passive stretch in arms and legs. Walking was normal. There was no disturbance of the pyramidal tracts. She was well oriented; speech was much improved; memory was much improved, except for events surrounding the suicide attempt. Two months after her intoxication (November 1) the only evidence of neurological or organic psychiatric pathology was a slight facial rigidity that was difficult to evaluate. Sensorium tests were well performed. The depression continued and in December grew progressively deeper. The staff of another hospital to which she was transferred in January was not impressed by any masklike facies and reported her sensorium intact. The depression, marked by suicidal ideas, continued through October, 1939, at least. There was no recurrence of signs of organic pathology.

*Case* 11

Mrs. R. L., a 33-year-old married woman, became increasingly depressed over a period of eight months prior to attempting suicide with illuminating gas on June 25, 1940. The patient comes of Polish-Jewish stock that has been free of frank mental illness. The patient's mother tends to be erratic and unstable emotionally. The youngest of five siblings, the patient was highly pampered and grew to be very dependent on her family, sensitive and shy. She did well in school, graduated from high school and then helped her father manage a store. At 18, she suffered a depression following disappointment in love. At 22, there was a recurrence after the marriage of her sister to a man who had also courted the patient. The following year she married a salesman who was unable to offer the companionship and affection she sought. Their sexual adjustment was poor. There was one son, for whom she was a capable though somewhat overprotective mother. Attachment to her family continued, and socially the patient felt very ill-at-ease, inferior, tense, so marked at times that urinary incontinence occurred.

On the return of her married sister with her husband to the family residence, the patient became tense, unhappy and gradually depressed. For seven or eight months, she was self-depreciatory, retarded and spoke much of suicide. On June 25, 1940, the patient was found unconscious in a kitchen filled with illuminating gas for three or four hours. Oxygen was administered by pulmotor for one hour and by oxygen tent for a second hour. Metrazol and coramine were used as stimulants. The patient was in deep coma for three hours after the start of treatment. Cyanosis and pulmonary edema were present. On being aroused, she is supposed to have made a complete recovery except for a mild headache. However, in a few days there was marked impairment of memory. On admission to the New York Hospital—Westchester Division on July 4, the patient was confused, disoriented. She had no memory for recent events, and marked impairment of memory for remote events. There was complete amnesia for details of the suicide attempt. Emotional blunting was marked, and she could not be said to be depressed. Apart from an unsteady gait, the findings on physical ex-

amination were not remarkable. Laboratory findings were within normal limits. During the first two months of hospitalization the patient gained in strength, but a shuffling gait with reduced associated movements of body and upper extremities became quite definite. Her facies became masklike. Deep reflexes became hyperactive. There were no other definite pyramidal signs. During the third month of hospitalization there was a substantial improvement in memory and orientation, but since October 1, 1940, considerable impairment in memory and other intellectual faculties has continued without change. Lenticular nuclei signs have not improved. Depressive symptoms that became marked by the third month of admission also have continued without change.

## Discussion

A study of 15 patients can barely offer anything conclusive on the prognosis of carbon monoxide poisoning. But in view of the apparent rarity of cases that have survived suicide attempts and subsequently shown nervous system damage, these cases may prove to be a helpful contribution. They indicate that the prognosis for complete recovery is good if the patient regains consciousness within one hour after removal from the toxic atmosphere. If unconsciousness lasts longer than one hour, the outcome is highly unpredictable. Some may recover completely; others have permanent, crippling defects. What the variable factors are, it is difficult to suggest. There is no evident difference between the toxicity of illuminating gas and that of motor exhaust gas. In regard to treatment, the type of oxygen administration alone does not seem to affect the future course of serious cases. Case 11, unconscious three hours (illuminating gas) received inhalator oxygen for two hours and after a short period of improvement continued to show serious pathological changes indefinitely; while Case 13, unconscious six hours (illuminating gas) received inhalator oxygen three hours, and recovered in three weeks. Case 15, unconscious 10 days (illuminating gas) was the only one in which blood transfusions were given. Pulmotor oxygen had been given for only one and one-half hours. This patient, as noted before, recovered from the organic

pathology in two months. Whether transfusions played any rôle in the recovery is, of course, highly debatable.

An interesting problem is the effect of the gas intoxication on the course of the preexisting mental illness. Here again the material is rather meager, but all evidence indicates that the original behavior disturbances continue on their probable courses unaffected to any significant degree.

## Summary and Conclusions

1. A study has been made of 15 mentally ill patients who attempted suicide by motor exhaust gas or illuminating gas. The courses of these patients have been emphasized to aid, in a limited way, in the prognosis of cases of carbon monoxide poisoning.

2. Four patients who had sufficient gas to cause acute symptoms, but not unconsciousness, developed no sensorium or neurological changes.

3. Four patients who were unconscious up to 30 minutes developed no changes.

4. Two patients who were unconscious about one hour developed transient neurological changes. The sensorium of one was intact; cerebral arteriosclerosis complicated the case of the other.

5. Five patients unconscious anywhere from three hours to 10 days showed extreme variability in power of recovery. One, unconscious 10 days, recovered in two months. The speed of recovery is also extremely variable.

6. A patient poisoned by carbon monoxide is not likely to have serious sequelae if he regains consciousness within one hour after removal from the toxic atmosphere.

7. Beyond this point, there appears to be no correlation between the duration of unconsciousness and the severity and duration of pathological clinical changes.

8. There is no important clinical difference between the toxicity of motor exhaust gas and that of illuminating gas.

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# THE MASSIVE STRUCTURE OF DELINQUENCY*

BY ARTHUR N. FOXE, M. D.

At times one picks up a paper by some scientific writer, let us say John Doe, and finds that by some strange adventure the bibliography consists of items all by the said John Doe. Such a situation must result but rarely out of scientific necessity. If the present writer erred in the past, it has been in the other direction, a loathing of being repetitive. But for once, it seems necessary to violate the rule, not that the writer is going to quote himself, but it will be helpful in conveying meaning, to cite personal experience and the nature of that experience. There is another reason. The writer's own position and the complexion of the times are favorable for a grand summing up. After a decade of active interest, although never sole interest, in the problem of crime, he finds that interest wanes. One grows older, wiser, and leaves certain roads for another generation to make ever wider and surer. In two monographs, about a dozen papers, a score of book reviews, and a number of court opinions, the writer has presented one consistent view and way. This evening, the decade that began in 1932 is rounded off, and he does not anticipate making further contributions in this field. None the less, it is not possible to be sanguine in the matter, for a career with the criminal is sure to hound one almost as much as the career of the criminal, whose complaint is that he is not let alone.

From the psychiatric point of view, the decade has been a very interesting one; it sweeps from the profound world depression of 1932 up to the general maniacal excitement of today. The writer was somewhat shielded from the world stream of events by civil service tenure for the first six years. Some lucky star has permitted him to retain a point of relative objectivity even until this troubled period. In that first six years, he examined some three thousand men at the Great Meadow Prison and did extensive analysis on a selected group of about thirty-five. Private practice always went side by side with this, lest he fall into a rut. His contacts

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were with the criminal, his keepers, and the ramifications of the correction system in government, in the courts, and in relationship to the general public. During the past four years, the writer's interest has been more that of the outsider looking in—also looking into those frequent delinquency trends in the average population which are found in a psychiatric practice, feeling the public pulse as it were. The decade is thus rounded out with a panoramic viewpoint.

It is not lack of esteem for this audience but a desire to be clear that prompts a first definition of very simple things. What is a crime? It would be interesting to know how many of you are able to tell the contents of the first paragraph on the first page of your sugar ration booklets. This is not a statistical seminar, and there is no plan to make the evening unpleasant, so the psychological riddle may be left to each one of you as to why the paragraph was or was not remembered. You will see that it is important enough, for after the glaringly printed word "warning" it reads as follows, "Punishment ranging as high as Ten Years Imprisonment or $10,000 Fine, or Both, may be imposed under United States Statutes for violations arising out of infractions of Rationing Orders and Regulations." That is no light sentence. It brings the problem of the evening preciously close to the spoonful of sugar you put into your coffee, or tea if you prefer. This is only one law and only one federal law.

Besides federal laws there are state, county, and city laws. Let us momentarily drop what are called international laws. The abridged edition of the Penal Law of New York State, which describes the various crimes and the punishments therefor, has 224 articles and 2,502 sections. That is a lot of laws. They cover crimes from murder to such offenses as you see described on the walls of trolley cars or subway trains. The existence of so many laws suggests that there might be a tremendously widespread tendency in human beings to disturb the social comfort and security of others.

If one reads the newspapers of the past 10 years one finds an extraordinary amount of space given to violations of law which we call crimes. In some papers, murder usually occupies the front page while business crimes are tucked away at the end. In other papers the problem of murder never graces the front. In these

latter, only distinguished individuals who commit crimes make the front page. It is sufficient to say as Will Rogers did, "All I know is what I read in the papers," in order to get an extensive training in criminology. It suggests, more strikingly every day that social position, economic security, and eminence are no guarantees that an individual will not become a criminal. The old adage "poor but honest" does not apply, and one may invert a popular belief and say that even being poor does not protect one from committing a crime. This is not to be at all facetious but is to use these methods to unfold gradually the second theme in connection with crime, its massive structure. If all the writer were to tell was what he had read in the papers of the past 10 years, it would be weeks in the telling. In fact, it takes a half dozen different papers describing any one day's crime news to fit the pieces of a crime together. Reporters have different biases, and what one paper finds is fit news to print another paper finds to be unfit. The underlying psychology of this alone is enormously interesting.

To the casual reader, the day to day reports of crimes may seem like isolated instances, but unfortunately this is not so. The isolated case is the enlargement of a tangled thread that runs through the warp and woof of society. Jewel thefts are common, but it is rare to read of jewel receivers in the papers. Holdups are common, but the writer does not recall having read of gun-sellers in the papers. Do not be so naïve as to believe that the criminal steals his guns very often.

The newspapers have a tendency to use the language of the penal code in various strange ways. Cartoons and editorials commonly speak of international banditry and the like. Whole nations are labelled as criminals. Apparently people feel there is some relationship in all of these problems in that one nation becomes the policeman and another the robber, very much as children play at cops and robbers. The writer is not in a position to contest this newspaper view on the extent of criminal behavior. If it is a correct view, it would add to the belief that the structure of crime is indeed massive and that possibly crime in times of peace is the last surface sputtering of the lava when volcanic human eruptions have at least temporarily exhausted themselves. If what the newspapers report is true, these volcanic eruptions of human nature are pre-

rational, pre-intellectual, pre-analytical, indeed pre-psychological. Hence the writer's subject this evening cannot deal with psychology in the ordinary sense of the word. This is not even the stuff that dreams are made of. Talking of psychology here is like talking of the snakes in Ireland. Psychological terminology here is like sawdust in a fire. There is no longer any of the usual unconscious —the unconscious has become conscious. This gives us a clue as to why certain people have denied that there was such a thing as the unconscious. Intellectually it meant nothing to them; and as far as behavior was concerned—well, where a person is not damned by a tribunal we leave him to his own conscience.

Thus, each one of us is analyzed by the stream of events, the quick turns of fortune, the sharp knife of cosmic surgery. Violence, one may take it, is of the universe as well as universal. Man's stature in the face of all this naturally must shrink. His limits are those of life itself; and what a flimsy structure he is after all. If he sees, his pride of self and prestige must sink. Fortunately or unfortunately, he does not see the Lilliput of which he is part. His quest for power and desire to hold power boomerang inevitably in his own catastrophe. The writer does not believe that any of our rather poetical history books take these factors into account. It is hard enough to observe one's own time with some detachment, much less observe with any accuracy things past. Human beings exhibit the peculiar reaction of treating past violences as if they had not occurred, of romanticizing over them and of handling them sentimentally. The intellectual who taboos sentimentalism is only making a further effort at suppression. He does not see the problem at all. It is an odd quirk in men that makes them chortle over past situations of pain.

The writer has gone wide to indicate the massive structure, depth and fluctuation of crime. Macroscopically it seems to include, not by theory alone, the butcher, the baker, the candlestick maker, rich man, poor man, beggarman, thief, doctor, lawyer, merchant, chief. Children in some strange way make bedfellows of those whom on second adult consideration are no more strange to each other than the counted buttons of a vest.

After this rather crude description of the macroscopic picture of crime, it becomes necessary to examine microscopically that com-

pact bit of universal structure that we call *the man.* It is possible to examine any human being microscopically by analysis with similar results. As the writer has said, for many years it was his lot to be in a position where he could examine what we call criminals in this microscopic and analytic way. His conclusion was a very prosaic one. It may be judged that after what already has been described you can see that the writer is neither condemning nor flattering criminals, by saying that he found them to be, without exception, just human beings. You should be advised that a large part of the population does not believe that criminals are human beings. Persons of this opinion labor under a vain delusion that man is appointed to be some special creature in the universe. It is not enough to be different. They feel one has to be superior.

Inasmuch as this is a summing up, it is possible only to paint the picture in broad Van Goghian strokes. In 1939, in a monograph on the life and death instincts, the writer gave in fairly bold relief what he had found to be the three chief etiological factors in the "criminoses." By some strange coincidence (you will note how often the word strange is used) no reviewers mentioned these data. They are: first, a severe trauma to life or to the vita (the vital drive) sustained in infancy or early childhood. To this would be added the continuance of a stage of the traumatic situation for a considerable time. The traumatic situation, revealed only by depth analysis, usually is one of violence. One person recalled being torn from his mother's arms by an irate father, never to see her again; he was two at the time. Another recalled a stepmother who viciously, in anger, and with a knife stabbed the two eyes of the only picture of his mother. Another recalled a violent beating and homosexual assault at the age of four. Another remembered a violent thrashing by a mother and three brothers for the theft of an old 50-cent paper bill, which later was discovered to have been stolen by one of the brothers who was most active in the thrashing. Another person recalled a vigorously playful mother who, in addition to her manual cuffings, once cut his penis with a breadknife. One remembered being chained up for a day by a choleric father. One recalled standing beside his father as the latter carried on a gun duel with a relative. One remembered a flight through a fire escape at the age of 13, his father in hot pursuit with a gun in his

hand. One does not find such experiences in every childhood. The additional factor here is that one does not as a rule find any leaven in the family environment. It is excessively rigorous and harsh. The surface worker will find many broken homes in the history of criminotic individuals, but he cannot see the true causes. The truth is that violence begets only more violence.

The second etiological factor is that of a real want or need that cannot be satisfied in the home but is otherwise satisfiable. The writer supposes you will expect him to say it is the economic factor. The writer wishes he could say this. It would be fortunate for mankind if this were so. But one can only point out that the economic structure is relatively new in man's development, that it is a convenience, a relatively crude projection of a need to barter instead of to kill, a relatively crude way of not carrying all of one's wares on one's back and not carrying all of one's emotions on the sleeve. Eventually, in all ages and in all systems, it has proven inadequate to control violent outbursts in men, while it is used as a necessary instrument to express omnipotence. Were it not for the economic system, this omnipotent need would express itself presently in some other form. It is only necessary to listen to social groups and bodies of learned men in discussion to see that the same problems arise where no money is involved.

No, the economic system is not the cause of crime, but it is the reason why poor people generally are the ones found in prisons. Crime in every form from homicide to petty larceny exists among the wealthiest and the poorest. Larceny among the wealthy becomes kleptomania. The writer does not recall a single case of kleptomania among the very poor. The impulse in both rich and poor is the same. If, however, one begins with the approach that the economic system is all important in the causation of crime, then, if you have money and steal nevertheless, the case is kleptomania. Is it not obvious that if a gangster had a couple of hundred thousand dollars, he would stop his practices if he were a sensible human being? He also must be suffering from a mania if he continues to steal. In both rich and poor, the impulse to steal and kill is alike. The writer does not think the poor make better soldiers than the rich. What is called cold-blooded murder on Tenth Avenue is called a crime of passion or honor in the silk-stocking dis-

trict. The outward complexion of the crime is what the individual happens to be busy with, whether it be getting a dollar or a sun bath in Florida. The impulsive behavior is the same.

Whereas the causes of crime have very little if anything to do with the economic system, it is most certain that the economic system has a lot to do with who is going to be punished for the crimes that are committed. In our society, time and money are equated. Time and money efface and bury all sins. Considering the great masses of poor people it does not take many violent crimes among the wealthy to show the perfect statistical counterpart. Apparently we need scientific Gallup polls. Nor does wealth mean education or culture. Nor is going to college the same thing as getting an education. Nor is the environment in a mansion necessarily less brutal than in a slum. Of course in the slum, all the neighbors can hear about it. The writer can only refer you back to the newspapers which day by day become more interesting. No, it seems to him that the fundamental idea of the problem of eradicating the causes of crime through the economic system alone is fatuous. Do not think the writer is putting up a brief at the moment for one economic system or another. He is indicating how massive the structure of crime happens to be. In a non-economic system, the prison populations might be recruited from those with less prestige. It seems that prestige is acquired by some sort of vaccination and confers a certain immunity. Then you will ask what the writer means by a real need. By a real need, he means what follows from the foregoing—a lack of real human personal warmth, understanding, encouragement, feeling, balanced firmness, limited emotional sweeps and such like. He does not say that these qualities are generally attainable in human beings or what brings them out. He is pointing out the facts of a problem. He is not a pennant bearer for these ideals. He knows the limitations of human beings including himself. From the families he has described—and again he repeats that they exist as extremes in every stratum of society—you will see that such qualities are no real part of the early environment of the criminal. You already may see that the structure of crime becomes massive in its involvement of the family, although where the traumatic situation has been acute and in-

tense for a short period and never compensated for, the persistent quality of the environment may even be average and yet produce the criminal.

The third factor that the writer asserted was of great etiological significance is the hidden participation of other members of the family and later of other members of the community in the criminotic behavior. This participation may be overt or merely consist of sanction in any number of possible ways. The bribe-taking judge, the sharing policeman, the seller of stolen goods, the gun-seller, down to the relative who takes a gift of extraordinary dimensions, not questioning the source or blinding himself to the source, all contribute to the crime. When a man who has stolen reads of the thefts committed by some distinguished man he automatically gets sanction for his own crime. The thread continues more subtly when some official gets sinecures for others on the basis of largesse to himself rather than the real merit of the individual and the nature of the position to be filled. Again the economic structure is the surface manifestation, like a scab on a poorly mending wound. Crack the economic system and you will find that blood runs more thickly than water. Power by any other name is no rosier.

This is what is found in the microcosm of the criminal; and this again leads one into the massive structure involved. One may go one step further. In children, it for long was felt that the child who did nothing—good or bad—was non-delinquent. This is all the more paradoxical in that the word delinquency refers to an omission rather than a commission; yet acts of commission are punished more. It is as if society sensed that it had enough on its hands already with the crimes of commission. Were the factor of omission as extensively written into the penal code as the factor of commission, the chronicle would be spectral and ghastly and would fit man more properly into the universe in a non-omnipotent and in fact relatively powerless position in shaping his own destiny.

It might be said that the writer has gone to philosophical extremes and that after all crime is nothing more than what society decides is criminal. But, oddly enough, society at one time or another in every cultural development sooner or later considers, actually and factually, that everyone is a criminal. The datum on

the sugar ration card is only a supposition. In the beginnings of a society, people who will not work are saboteurs and criminal. People who will not fight to defend that society are criminal. People who revolt are criminal, definitely and by law. When societies crumble, those who previously were in power as law-givers, suddenly become criminal and are imprisoned. In the history of any one culture, it is hardly possible to find anyone who at some time or other is not considered to be a criminal. You might say, however, that crime is merely what society considers to be crime at only one particular time. If one accepts this view, one is merely the policeman; and the only method is the shortest way with dissenters. This view, of course, is akin to the most criminal type of behavior and is characteristic of war psychology when there is preciously little time for anything but thinly thought out and almost purely instinctive behavior.

Thus is presented the picture of the massive structure of delinquency. The pessimistic quality inherent in this picture is less important than are the facts. Winds blow and fade away, mountains endure. Man blows hot and cold but human nature endures. In our day, the skin of humanity shakes and trembles and cracks from a deep upheaval; the suppuration within man breaks forth here and there. Malaprops, incompetents, poseurs, all crumble into the fissures; some only act as if they battle, others hide in the ulcerous excavations for what they hope will be a better day. We are all involved in a cataclysm of nature, for one must remember that man still is part of nature. It is vanity to believe that man creates wars. It is vanity to blame and fix guilt. Even these compulsions, the vanity itself, are all part of nature. Actually we still know very little about the real world.

For those who do not like the picture that has been painted, one may admit that it is the denuded picture. There will be a subsidence of this present violent outburst. There again will be the fat years. In fact, on earnest consideration, it seems that the race of man will continue the way it has been going for many, many, many years to come. However, another thing is certain—for a number of years man will not be able to forget what he has seen. Force begets force, and war begets war. The prison warden with his narrow vision does not care very much what happens to men after

they leave prison, just as long as his prison is quiet and he can report it to be so—how powerful one can seem to oneself as a warden of a little grey prison in the west. How happy it is that omissions are so guiltless, especially with walls and machine guns to boot. The same principle applies to the policeman who chases what he calls hoodlums from his beat to the next beat. The writer does not know why, but in over six years of prison work, he always examined a man in private unless expressly forbidden to do so by official order, and this latter was rare; and yet in all this time a hand was never raised against him nor was he ever abused or insulted in any way by an inmate. Nor did the writer ever threaten punishment of any kind, give punishment or recommend punishment. Of course this was not due to the fact that men in prison are cowed. The writer has known of some of the most powerful and important officials not only being insulted, not only being threatened, but actually being assaulted in prison. The writer has tried in the last paragraphs to give a picture of the men who force the shape of penal programs. It may be given as a truism that where the handling of men is not by the most talented it must be by the most forceful. Force can change a crime from one of commission to one of omission only. In its smaller aspect, one sees how risible it is for some legislator to squabble over a few dollars for a mental hygiene clinic. How the times point the minute measure of his wisdom and vision when millions multiply into billions and money breeds like locusts. Man truly is penny wise and pound foolish. Considering man's infinite ingenuity, solid prison walls with no egress are as thankless in the long run as the great wall of China and a more recent wall that tottered and fell. Human nature and instinct cannot be walled back alone. Without egress for its billions of surging gallons, the Colorado River would soon work havoc behind the massive Boulder Dam. In human affairs, it is wise that every congress shall have at least a parity of egress.

Inasmuch as we are in many respects only average, there is a little comfort in truisms such as, "Who lives by the sword dies by the sword," "Cream comes out on top of water," etc. They are a small comfort indeed. For those whose range of interest is greater, there is one phenomenon that may give a little hope and balm. All the more so when it is recognized that no ethical system ever pro-

pounded by man has ever survived. What the psychological and biological origins are in man of what we call science or the scientific method, we do not know. We do not know whether it will survive longer than many age-worn ethical systems. It already has had an infinitely longer life than our own lives or the present world setup. It is the one reckoning post in a giddy world. It is beset by religious elevation in that there is a tendency to worship it in itself. It is the one thing that seems to be relatively free of the three great bugbears of modern times—money, prestige, and power.

In a beflooded civilization, science is the one thing that still shows some of the testamental whiteness of the dove even though it occasionally be sent on a foul message. In a darkened world, science still is the one harbinger that has something of the testamental gleam of the Star of Bethlehem. But if it is not to be only what its predecessors have been, it must have much more than only man's faith—and it does seem, at least to demand that more—and that is a constant and impartial scrutiny not only of man and the world but of science as a part of the world and without self-deification. Where there is no modesty and humility, there is no science. In the face of all of this, it is gratifying that man will find self-deification increasingly painful for many years to come if not for evermore. Such is the one speck of what may be peculiarly man's in this strange, shadowy, massive, rolling, spiral nebula which itself is so small a part of the universe.

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# PASSING THE MERIDIAN OF LIFE

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## I

One of the present battle cries of medicine is gerontology. Most certainly, there is more than one reason for alarm in contemplating this subject. Among other things, the considerable increase in degenerative processes, which is to be noted along with the success of science in prolonging man's life, is disquieting. Moreover, the prolongation of man's life allows the forecast for not a too distant future of such a change in the trend of the population that the consequences in social, economic and political spheres may be expected to be tremendous. It is, therefore, obvious that we ought to have a better knowledge of the process of aging, so as to be able to influence it in a desired way, or at least to be able to meet it adequately.

For a successful study, the process of aging must be examined from a variety of angles, such as the anthropological, the biological, the medical, the physiological, and the chemical. It is felt that the psychiatrist should make his contribution, a suggestion based on the fact that psychopathology gives hints of changes which might take place within the total personality. For example, there may be dreams which forecast the outbreak of an acute infectious state.

To elaborate on the psychiatrist's interest in the problem, it may be said that the psyche and the soma are aspects of one and the same, the totality, equipotentially indicative of the process within the totality, but measured by different methods. The writer has recently discussed the question elsewhere[1] differentiating the "old" traditional view of the medical man who was primarily, if not solely, interested in the physical aspects of the total personality —the mental being "somehow" related to the physical. This attitude eventually progressed to the idea of "parallelism" between physical and mental, and to the advanced view just expressed. It is this advanced view, as already stated, which allows one to draw physiological conclusions from mental states. Such a viewpoint gains considerable strength from the studies of Kurt Goldstein[2]

who demonstrated that mental manifestations may indicate organic lesions of the frontal lobes. The present writer believes he has shown that what may be called an involutional mental syndrome[3] is suggestive of physiological changes of a definite character, even if we do not know the exact relationship of the mental and physical manifestations.

Opposed to this proposition, is the argument that the mental and physical symptoms of the climacterium do not coincide or run similar courses, a view derived from the fact that, in certain cases, substitutional hormonal therapy does not influence the process. It seems obvious that the argument is ill-founded; it is rooted in the old view of parallelism. The failure of this therapy to produce uniform results—or its lack of results at all in some cases—is due to more than one factor. Among other things, there may be lack of receptivity for the substituted hormone due to the immune-biological peculiarities of the individual. Above all, it is necessary to appreciate that the mental condition outlasts, in many instances, the physical; it becomes, so to speak, dislocated from the unity of functions, acting as if on its own.

Still another approach from which to evaluate manifestations of the total personality is the psychosomatic. Myerson[4] speaks of psychosomatics and somatopsychics. This is in reality only a change in names; it does not differ from the dualistic organic and psychogenetic, it emphasizes the "etiological," a very disputable point in psychiatry. The present writer shares the monistic approach and, therefore, considers the psychosomatic as representing an interwoven ensemble of the psychical and somatic elements, and not just a combination of the two. It is understood, however, that there may be supremacy of one or another level of the total personality at different times.

Studies on the evolution of the total personality show the segmental and hierarchical character of its integration. It is known that the differentiation of viscera and glands precedes the differentiation of the nervous system, that the anabolic parasympathetic system evolves earlier than the catabolic sympathetic, facts which suggest that the central nervous system requires for its functioning continuous impregnation with necessary biologicals which are produced at varied levels of the totality. On the other hand, the

psyche, which is constructed and oriented upon the brain, has a much wider horizon than neurological mechanisms. However, since the psyche fuses in activity with some neurological mechanism, it is suggestive that the psyche, in turn, requires for its proper expression a certain neurohumoral equilibrium. The difference in the width of the horizon of the psyche and the neurological mechanisms must be the reason why so many "causes" of entirely different nature may use the same forms of expression.

Another point to consider is the fallacy which assumes the autonomy of one or another level of the total personality or of antagonism between levels. The principle is rather one of homeostasis and synergy. For example, we know that emotional factors, through their influence upon the vegetative nervous system, may virtually "reach" tissues; we also know of the influence of the parasympathetic system upon the brain, as may be judged from the ability of the parasympathetic system to induce sleep. Furthermore, there is the evidence of acceleration or decrease of cerebration due to the influence of one or another hormone—considering that the vegetative nervous system comprises the sympathetic-parasympathetic, the endocrines and electrolytes, a matter emphasized by Zondek. Concerning synergism, Burridge[5] convincingly discussed the matter, showing the lack of validity of the idea of antagonism or of opposition between levels of the personality.

Some may see a contradiction between the statement that there is equipotentiality of the mental and the physical and the view that there is fusion of the two into one. But the contradiction is only apparent. Both are approaches to one and the same thing, the totality; the concept of equipotentiality is helpful in sizing up a phenomenon, that of fusion in giving hints as to its mechanism.

This discussion is designed to assist in clarifying the problem concerning the process of aging. That process, as a whole, covers a rather large and complicated field. The discussion here will touch on only a detail of the problem, namely the *time* when man begins to age. Terms are ordinarily used indiscriminately. Man ages as a matter of fact, from birth, or even before that, until he dies. However, aging is commonly understood to mean the duration of man's decline from its beginning to its end. As far as the present problem is concerned, this period may be considered as

that of *passing the meridian of life,* even if the expression sounds allegorical. It is of obvious importance to establish, if possible, what this time is, in order to be able to follow up the process in its entirety, a necessary prerequisite of better evaluation of the situation.

## II

It may be well to explore what can be learned about our problem from certain ancient and modern concepts and knowledge. There is the thought that aging is something pathological, as evidenced from the old saying, *Senectus ipsast morbus.* It may be surprising that this is echoed in the attitude of Metchnikoff,[6] who denied that aging, as it is observed clinically, has a physiological character. As it is well known, Metchnikoff considered aging to be due to auto-intoxication resulting from rotting contents of the intestinal tract, and especially the colon. These and similar attitudes suggest the possibility that aging is sometimes confused with senility. It would seem reasonable to consider aging physiological, and senility physiopathological.

Again, there is the view that aging is due to the "wearing out" of the organism. If this is so, aging should lead to exhaustion or so-called senile marasmus at the time of death. And yet this condition is seldom found. For instance, Groddeck[7] does not mention it as a cause of death in 283 autopsies of persons over 80 years of age. It may be, then, that Metchnikoff is right in his assertion that our deaths are not physiological ones.

There is, further, the saying that man is as old as his arteries. This is counterbalanced, for example, by the modern ideas on the relationship of arteriosclerosis to cholesterol metabolism. These views might allow the paraphrasing of the saying into a declaration that man is as old as his ability to disperse cholesterol. This in turn, would reflect upon the particular rôles of certain levels of the total personality—reticular, endothelial or endocrine.

There is also the theory of Ribbert, quoted by Sellheim,[8] to the effect that there are central factors responsible for aging, namely the heart and the brain. Concerning the heart, there is a recent discussion by Karsner[9] which points out that there are but few alterations in the cardiovascular system which are unquestionably due to involution. He says that some changes considered by cer-

tain authorities as involutionary may as well be due to disease, remote or recent. In the brain, the findings of atrophy, degeneration, etc., may be regarded clinically as pointing only to the negative, not to the positive, symptoms of aging—negative and positive considered in the sense of Hughlings Jackson—and, therefore, do not cover the ground.

Of theories besides the ones which emphasize the supremacy of one or another structure in the process of aging, be it the brain, heart or endocrines, there is a general constitutional approach. For instance, Child[10] believes that old age is primarily due to a decrease in the rate of dynamic processes consisting in changes of the colloid substratum of the organism. From this viewpoint, the theory of von Braunmühl[11] is of interest. This author approaches the subject of aging from the standpoint of colloid chemistry. He believes that certain brain changes, such as senile plaques with their peculiar structure of open space, nucleus and corona are most striking features of precipitation in colloid chemistry. The precipitation is one of colloid material by an electrolyte from a supersaturated solution. In this manner, von Braunmühl also discusses convincingly other findings which belong to the senile changes of the brain.

In line with this approach to the problem is that of Burridge.[5] This author attempts to find a correlation between psychological phenomena and histochemical changes of the neuron. According to him, central nervous system neurons are rhythmical tissues which have acquired a new property called responsiveness—a psychological phenomenon. The activities which evoke responsiveness are neural. Such activities—or the excitation process—depend upon the combination of two sources of energy, colloidal aggregation and electrolytes. He denotes colloidal aggregation by the letter *L*, and electrolytes by the letter *H*. *L* gives data for sensation and *H* the emotional tone and judging capacity. The action of the two elements is synergic; the more there will be of *L*, the less of *H*, and vice versa. *L* plus *H* gives *T*, which denotes the capacity of the brain for responsiveness. *L* and *H* may be maladjusted, which will result in uneasiness or agitation. If the capacity of *T* is surpassed, the individual is as if thrown out of gear (unconsciousness).

Of further interest in Burridge's discussion is the concept that rhythms may be quickened or slowed down. Again, there may also

be changes in the amplitude of the process of excitation. The greater the amplitude, the slower the response. In aging, there will be a weakening in the strength of the neural process; there will be lowering of the production of *L* and *H*. The views of Burridge appeal to the writer because they make the working of the neural process so much more comprehensible. This comprehension, in its turn, is an aid to better understanding of psychological manifestations.

Of other physiological data applicable to the evaluation of the process of aging, there may be mentioned the idea of Carrel[12] regarding physiological time, an idea elaborated by du Noüy.[13] The latter developed a mathematical formula which measures the rate of reparation of damage to the organism, as shown by cicatrization of wounds. His studies show—and the writer has had some personal experience with the problem—that aging is a gradual process which has different rates at different ages of a person.

In summing up the researches of the variety noted, it may be said that the viewpoint of du Noüy deals in general terms with energy, which, however, gives no clue to the onset of aging. The physiological studies of Burridge, while invaluable for the understanding of the process, yet fail to establish the time. The findings of von Braunmühl, while also of considerable interest, point as far as observable to an advanced, if not final, stage of the process of aging. On the other hand, certain anatomical and physiopathological data, while not altogether satisfactory, allow the interpretation that aging begins somewhere in the second half of the fourth decade. However, there are certain findings which seem to point to an earlier time. For example, Cohn[14] emphasized the fact that arteriosclerosis may be anticipated to some degree in nearly all who are 30 years old and more. Romeis[15] demonstrated that the mammary gland in women not infrequently shows "senile" changes in the begining of the fourth decade. Dayton[16] found that non-hereditary forms of mental defect may be linked with the age of the mother at the time of birth of the child. His material suggests that childbearing be avoided after 35, which points to the conclusion that at that year the woman has already aged. Deckert, quoted by Lewis,[17] discovered that persons under 30 years of age possess a greater tolerance for alcohol than do older persons.

## III

The problem may now be viewed from another angle. From time immemorial, man has been inquisitive about his existence and the life process. Each epoch has left its stamp upon the answer to man's questioning, depending upon the state of knowledge of a given time. However, it is easy to demonstrate the recurrence of thought of the same content in answer to the puzzle, with the differences merely in its expression. One may, for instance, take the idea which is believed to have originated with Pythagoras, if not with somebody earlier, that life can be divided into seven ages. This is modified by Sir Thomas Browne to the effect that every seventh year carries some altering character of the temper of the body, or mind or both. The same thought is reflected by the poet who compares the stages of life with the changes of the day which run from dawn toward the depth of night. Again, there is the artist of the past who pictured the ages of man in decades, each symbolized by a different animal. While this art is a humorous reflection of the changes in temper at each decade, it does not suggest when aging actually begins. However, there is a picture by another artist of the 18th century, showing the ages of man as ascending and descending steps of a double ladder. This artist placed a man and a woman on the top of the ladder, a step symbolizing the fiftieth year, as representing the prime of life.

Sir Walter Scott apparently had the same idea in mind when he spoke of middle life as a time when one has reached the other side of a hill. At this stage: "The wind is not so good, the limbs are not so tireless, the stride is shortened, and since we are descending we must be careful in placing our feet. We can rest and reflect since the summit has been reached." This attitude toward middle life as the time of beginning of aging finds support from various sources. For instance, Socrates identified aging with moving past the technique of science to its higher meaning. Tennyson thought that aging allowed one to see things in perspective. Tolstoy identified aging with freedom from passion and the transfer of energy to higher loves.

On the other hand, there is some evidence that aging may be apprehended by the person much earlier than middle life. For ex-

ample, Oliver Wendell Holmes wrote to his friend Sir John Pollock that he did not mind getting old. Holmes was 43 at the time of this writing. While this does not indicate that this was exactly the time when he began to feel his age, the present writer's observation of a considerable number of persons is that it is the age when most individuals seem to appreciate that they are getting old. Such appreciation may occur earlier. Tolstoy speaks, in "Anna Karenina," of Levin examining himself before a mirror, and noticing the graying of his hair and decaying of his teeth. The hero was at that time about 35 years of age.

The question naturally arises: What makes one suddenly become conscious of his age? To be sure, the answer is essentially individual in character. In the case of Levin, the anxiety was a manifestation of fear of losing his love object. This point is worth emphasizing. In the writer's observation, many a man becomes conscious of his age in reaction to a feeling of fear of being rejected by the woman, especially whenever it concerns a much younger person than himself. There may be more banal ways of becoming conscious of one's age, such as meeting a friend whom one has not seen for many years. One may notice how old the friend looks. After an unconscious uneasiness, one may become alarmed about oneself, and eventually appreciate the change that may have taken place.

## IV

It appears, then, that, with a few exceptions of very sensitive and intuitive people, we appreciate our aging much later than available pathological data would indicate. (This is probably a defense mechanism of the total personality.) The question arises if it is at all possible to establish on clinical grounds the approximate time of onset of aging. It is believed that the question may be answered in the affirmative with the help of the following: 1. Evaluation of evidence pertaining to completion of structure of the organism. 2. Evaluation of the significance of the height of achievement by the individual. 3. Other clinical symptoms.

As to completion of structure, it is helpful to remember that man is an aspect of an evolutionary process in nature—or at least he is believed so, to give meaning to events. This evolutionary process

has been going on since the dawn of life. While there are many missing links in the chain of the process, and while we do not know of its exact nature, it is apparent that man may be considered, so far, the climax. It seems that ontogenesis runs in certain respects approximately the same course as phylogenesis, and that both have a physical and a mental aspect. It is of great significance that, as in nature so in man, mental evolution continues after the physical stops. One may compare the clinical manifestations of a mental condition which outlast the physical symptoms which may have ushered in the mental.

In connection with the latter, it may be recalled that von Economo[18] emphasized the principle of progressive cerebration in nature. It is, perhaps, here that one must look for evidence of completion of the structure of the organism of man, since it is the maturity of man which is significant of cerebration. It is maturity, then, which reflects the state of the totality, with its immediate substratum the state of the central nervous system. The completion of the central nervous system may be judged by the process of myelination which is not completed until late in adult life, and which reflects upon the function and increase in weight of the brain. Cutore, quoted by Tilney and Riley,[19] investigated the weight of the brain in 25 individuals of various ages. Cutore found that the maximum weight of the brain of the female in his series was 1,237 gms. at the age of 22, and that of the male 1,300 gms. at 24.

As far as external manifestations of growth may be indicative of completion of structure of the organism, the present writer believes that the progress from adolescent angularity to the gracefulness of the maiden and the corresponding agility of the young man may offer a hint. In studying motion pictures of movements of young persons it would seem that grace and agility are beginning to dwindle as early as the beginning of the third decade. This may be observed in a rather pronounced manner in the young schizophrenic who rapidly loses these attributes of youth.

Still another index of the completion of structure may be the time of manifestation of the height of physical ability of a person. H. C. Lehman[20, 21, 22] studied the subject extensively. According to him, football players do best at 24 or 25 years of age, boxers are apparently in best form at 26, and baseball players seem to reach

their height of performance at 27 or 28. Another example is army service; men between the ages of 20 and 25 make the best soldiers.

In considering the significance of achievement by the individual, it is perhaps best to consider first that of the highest possible order, such as achievements of the founders of various religions. It appears that Moses discovered his mission at the age of 30. Buddha was about the same age when he established his religious principles. Mahavira, who founded the Jain religion in India, was also 30 years old at that time. As to Christ, the words of St. Luke are very significant, namely that He increased in wisdom and stature and in favor with God and man from the age of 12 to 30.

H. C. Lehman again gives valuable statistics. He shows that inventors reach their peaks between the ages of 31 to 35, that scientific achievements are most noted between the ages of 30 to 34, and that in mathematics success falls between 34 and 38. For example, Einstein came out with his first statement on relativity at the age of 26. Edison had obtained about one-third of his patents between the ages of 33 and 36. In contrast to these figures, W. A. N. Dorland[23] states that those we think of as inspired by emotion, like dramatists and poets, have their most brilliant successes between the ages of 44 to 50, while those whose work depends on reasoning, such as philosophers and statesman, achieve their greatest successes after the age of 50. As extremes, one might mention Grotius who wrote Latin verses at nine and Verdi who composed his operas "Othello" and "Falstaff" between the ages of 74 and 80.

How can the given data be harmonized with each other? First, one must appreciate the fact that a certain person may remain exclusive in his achievements all through his life. For example, Voltaire remained intellectually superior to any of his contemporaries at the age of 80. On the other hand, the present writer would advance the idea of recurrently great achievement in man's life as prompted by certain epochs of life. It would seem that at critical times the system of defense of the total personality is acting as if it were spurred by the unconscious to particular compensation, in view of the threat to the security of the individual. This is borne out by the writer's study of involution of middle life.[3] He believes he has shown in that study that the symptoms which characterize the involutional syndrome may be observed earlier than middle life,

as well as later. Furthermore, it appears to the writer that the same symptoms occur when passing the meridian of life; the differential lies in the evaluation of the entire picture as a whole.

Of other clinical symptoms which in the writer's opinion may be observed as early as the end of the third decade, one may distinguish first the onset of tiring. It may not be very pronounced and is easily overlooked, as having no significance. But if one attempts to evaluate subsequent manifestations, careful inquiry into the past will invariably elicit this symptom. Formerly, fatigue was looked upon from the standpoint of autointoxication manifested at the periphery, namely, muscular contractibility. Inhibitory activity and excess consumption of glycogen were also regarded as causes. These factors when present are considered now only as contributory agents. The writer looks upon fatigue, as L. R. Müller[24] sees it, as a neural event. Fatigue, in this view, is considered to be due to electrolytic splitting and increased permeability of cell membrances. These factors allow extravasation of calcium, potassium and magnesium cations into the lymph stream. This causes lowering of the irritability of the neurons, and results in turn, in accordance with Burridge's ideas, in a decrease of responsiveness, or a decrease in psychic energy. Consequently, there is a loss in intensity of imagination or compensation with a subsequent let-down in creative work.

Another symptom is anxiety which may manifest itself in connection with one's work, social relations or sex life. At this time an uneasy idea regarding aging may appear for the first time, and often the thought of death may come to the foreground. During the period of growth, the individual is quite unconcerned about death, while now it may weigh heavily on his spirits. Death thoughts are strongly pronounced in the neurotic and psychotic. In certain cases of psychoses, such thoughts may be interpreted as an unconscious perception of danger to oneself projected in the fear of death, or symbolically in the fear of the unknown future. This observation may be also true in general.

The same anxiety may show itself in certain individuals in preoccupation with one's health to the point of becoming hypochondriacal. An interesting variety of anxiety may be the attempt by the person to "hurry up." This negative compensation is well por-

trayed by writers such as Stefan Zweig in the type which seeks to accomplish all he missed in the past in the course of one night. Another example of the phenomenon is the case of the unmarried woman who, while "very choosy" in the past about her future husband, later plunges into marriage irrespective of the qualification of the man. The person acts as if driven by fear of being too late, or as if in danger of missing the experience altogether.

Still another symptom is insecurity. This symptom may manifest itself in relation to any challenge of life. Here, the writer would like to discuss it in connection with the individual's "conduct in space," although to discuss the subject as a whole would be beyond the scope of this paper. However, it should be pointed out that man is deeply rooted in "space," which often becomes identified with other values. For instance, persons may identify space with their parental homes or families. D. L. Murray in his recent novel, *"Tale of Three Cities,"* writes: "Ludovica let her head fall on his shoulder . . . she murmured . . . . I *am* come home to my true *patria* here on your shoulder." In passing the meridian of life, changes in "space" are particularly instrumental in producing insecurity to varying degrees. This is especially notable in the immigrant.

## V

In summing up, it should be said that the limitations of this discussion are appreciated, and that any conclusions therefrom are to be considered largely tentative. Still, the following seem worth while emphasizing.

One way of studying the process of aging is the clinical method of observation, on principles applied to the study of other manifestations of the total personality. The process of aging manifests itself in changes of appearance, posture, gait, motility, inclusive of mimicry, and mentality. It is necessary to follow the process from the onset of its earliest symptoms of the dwindling of gracefulness and agility to the advanced stage masterfully drawn by Shakespeare: "Have you not a moist eye?, a dry hand?, a yellow cheek?, a white beard?, a decreased leg?, an increasing belly? Is not your voice broken?, your wind short?, your chin double?, your wit single? . . ."

Considering the studies of du Noüy, our duration may be measured to some extent. It might seem that the state of energy behind our duration may be compared with a ball of thread which unwinds itself, as it were, at a certain rate, now faster, now slower. In addition to the original dynamics of the process of life, the "unwinding" depends apparently also upon the forces operating upon the process. Due to the "biological conscience" or "wisdom" of the total personality, it seems to the writer that in sickness the rate slows, as if for reasons of conservation of energy. Experimental data on this are to be published. Under some circumstances, the unwinding may come to a standstill, with energy left unspent. This might be the reason why senile marasmus is infrequent. It may also support the view of Metchnikoff that our death, as we know it, is not physiological.

Clinically, our duration is projected in evolution and dissolution of the total personality. Dissolution or aging is a generalized process which proceeds in a jerky manner. It befalls the entire organism, attacking one level or another, or a combination of levels, at a given time. During the same time, compensation is going on, which may obscure the picture.

It must be understood that chronological age is not altogether indicative of the physiological and psychological age of a person. Still, there is a relative guide in the evidence presented to the effect that aging commences between the end of the third and beginning of the fourth decade. It has an individual character. Prior to passing the meridian of life, it is possible that man goes through a latent phase. At the time of passing the meridian, man generally passes through a neurosis of the nature of an anxiety state. This may be very mild and be practically unnoticeable, or it may be ascribed to other causes than aging. It may also reach considerable proportions, depending upon the potentialities of the total personality. In this connection, it is of interest that the number of first admissions to the New York civil State hospitals show a considerable rise in the age group of 25 to 29.[25] The anxiety state may be overcome by compensation in the form of achievement of a high order. Following such compensation, there is a let-down.

Once the situation is understood, the chief therapeutic aim is to help the person to adjust at this period of life. As psychiatric ex-

perience shows, one must prepare the individual in his younger days for events which lie in store for him at a later date. Therefore, teaching in school must take account of this problem on mental hygiene principles at appropriate ages for its comprehension by students.

Of other preventive measures, the present discussion laid emphasis on Burridge's findings. If psychical responsiveness is rooted in our colloidal systems and ionic *milieu,* then we must take care to maintain our sources of energy in a most advantageous state. We cannot as yet influence in a desired way the ionic *milieu,* but we may be able to do better for our colloidal systems. The colloidal systems, which give data for sensations and help our adjustment in "space," are nourished to a considerable extent by the environment or experience. Proper stimulation by the environment may be able to influence the adjustment of $L$ and $H$, which suffers at this time. The result of the stimulation will cause an increase in $L$, compensating the loss in $H$. It is, then, "space" or its symbolical equivalents which require our attention. To this end, experience shows that one way of compensation for almost any challenge of life, is by means of work. Therefore, considering the political, social and economic crisis of our times, a comment on public works is appropriate. No nation can have a healthy population or even survive if it cannot provide work for its people. This makes the question of public works a public health problem, which is of far greater importance than any other aspect of the public works situation.

As to more personal issues, since "space" is also identified with matters like marriage, family life, one's love object, etc., it is obvious that matters pertaining to such things as marriage, childbearing and maintenance of family life must receive the utmost consideration at the period of life under discussion.

In spite of the application of preventive measures, the appearance of the anxiety state at the time of passing the meridian of life is still likely. Once the condition is ascertained, it may be successfully treated by "common sense" psychotherapy. In case the condition is complicated by other personality conflicts, the latter should receive attention in accordance with the merits of the case.

In conclusion, one is tempted to cast a glance into the future.

In doing so and being armed with sufficient scientific imagination, one may almost see one's wish fulfilled, and therefore be excused for quoting Holland: "They live one hundred and thirty years and do not *age* for all that."

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# THE RORSCHACH METHOD AND POSTCONCUSSION SYNDROME*

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Certain clinical entities are diagnosed solely on subjective symptoms. Prominent in this group of syndromes is the postconcussion state, which presents the additional handicap to the clinician of usually involving monetary reimbursement for the injury and the never-ending problem of legal determination centering around differential diagnosis. Neurologists have recognized this diagnostic enigma for generations. The patient may have had the most severe skull trauma with no ensuing sequelae; conversely, the slightest injury may result in subsequent symptomatology that incapacitates the patient. Incapacitation may include psychotic states of varying intensity and duration; headaches, dizziness, syncopal attacks, gastrointestinal complaints, etc.; or a psychoneurosis may result, with a marked anxiety state and conversion phenomena. Another possibility is malingering. This is the *cause célèbre* of so many litigations and the thorn in the side of otherwise smoothly running workmen's compensation bureaus. Too often the patient with a genuine postconcussion state is unfortunately labeled "malingerer;" and as frequently, the sly and cunning actor who has been "blessed" with a brain concussion, consummately convinces a jury of his peers that his symptoms are genuine and compensable.

The neurologist would certainly welcome as an adjuvant to his diagnostic armamentarium some "test," some means of determining if the symptoms presented by a patient who has suffered a concussion in the past are or are not deliberately assumed or genuinely attributable to the trauma. Would not such a diagnostic determinant be appreciated equally by lawyers, insurance companies, jurists, and workmen's compensation bureaus? In this consideration, there is deliberate omission of all cases with skull fracture

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and concentration of attention on the more mystifying traumata which result in subjective complaints without any demonstrable pathological findings.

Denny-Brown and Russell[1] define concussion as "an immediate loss of consciousness following a trauma to the head, with retrograde amnesia." Strauss and Savitsky[2] state that concussion is "a series of events resulting from a blow to the head severe enough to cause disruption of intracranial equilibrium." Brend,[3] who has had a vast experience as a workmen's compensation medical referee, points out the importance of differentiating between contusion of the brain and psychoneurosis. He found that with cerebral contusion, headache was prominent, described as stabbing, throbbing, or as if a tight band constricted the head. Giddiness and inability to concentrate were other complaints. The patients tended to forget various details in their daily activities such as where they placed glasses or money or what was to be purchased. In contrast, the neurotic was vague about his headache and emphasized primarily his fear. Sometimes, headache was mentioned incidentally or at the end of an interview. The neurotic may complain of inability to concentrate, but he couches his complaint in vague terms, whereas the patient with contusion is specific, is more optimistic than the neurotic and may state that he feels "better than a month ago." The neurotic rarely admits improvement. Finally, the general attitude of the two groups reveals differences in personality structure. The patient with contusion may best be characterized as tough-minded, the neurotic tender-minded. Brend also admits to the possibility that a person with a neurotic personality may suffer cerebral contusion and that some individuals who have cerebral contusion may develop exaggerated fear or anxiety.

The writers take exception to Brend's differential diagnosis based on the critique of headache. Too commonly, one finds a nontraumatic case of neurasthenia in which there is complaint of a headache "like a tight band around the head," of an "inability to concentrate on his work." Likewise, if the genuine postconcussion patient mentions his headache first, and the neurotic last, what about the out and out malingerer who harps upon this symptom? Two years of intensive neuropsychiatry in the military have brought to the writer's attention sharply two types of malingerers termed

in the army vernacular the "skrimshanker" and the "goldbrick." The former is that individual who, having an actual pathological lesion, enlarges upon it and exaggerates the symptoms solely to accrue any benefits that he may reap. The latter[4] is "labeled by the layman as a faker, the police as a bum, the doctor as a malingerer and the army as a goldbrick." He is the prince of shammers. Allow a goldbrick who has had a minor head injury to meet a true postconcussion patient; and the goldbrick will appear in the hospital receiving room simulating in carbon copy likeness a syndrome that defies clinical denial.

Williams[5] has presented an interesting study by using electrical encephalography, but normal tracings can be found in both damaged and undamaged cerebral tissue; and the electroencephalograms of cerebral trauma and idiopathic epilepsy may be the same. Using this method of interpretation alone is unsatisfactory, for it requires additional evaluation of psychopathological and clinical studies of the total personality. Summing this up, Reese[6] declares, "A complicated and physicoelectrical machine cannot replace a detailed and sound neuropsychiatric examination." Parenthetically, it may be added that the latter, too, often fails to permit a positive diagnosis.

In view of the favorable findings of Brussel and Hitch[7] following application of the Rorschach psychodiagnostic method in military neuropsychiatry, it was felt that a similar approach could be employed in the problem of postconcussion states. Unselected cases as they came to the neuropsychiatrist with posttraumatic (cerebral) complaints were utilized for this work. The identical procedure employed by Brussel and Hitch was repeated in this study. The neuropsychiatrist first interviewed and diagnosed the patient. Then the psychologist, who had neither heard the conversation, seen the neurological and physical examinations, nor read the case history, was called in to administer the Rorschach method and independently record his findings and interpretation of the case. The psychologist resorted to both the orthodox (verbal) Rorschach technique[7] and the newer graphic method.[8] Results were then compared.

Table 1 shows the chief features in all cases that originally were thought to be pertinent to the study. The patients can be consid-

TABLE 1

| Case | Age | Time in army | Unusual factors in background | Familial pathology | Nature of injury | Date of injury | Onset of first symptoms |
|---|---|---|---|---|---|---|---|
| E. B. | 35 | 2 yrs. 9 mos. | None | None | Fell off Truck | 1940 | 1940 |
| A. B. | 25 | 1 yr. 1 mo. | At age 5 fell off horse on head | None | Truck accident | Dec., 1941 | Dec., 1941 |
| F. A. | 20 | 6 mos. | Kicked in head 1940 | None | Kicked across face | Dec., 1941 | Dec., 1941 |
| C. F. | 24 | 2 yrs. | None | None | Automobile accident | April, 1942 | April, 1942 |
| J. G. | 24 | 8 mos. | None | None | Automobile accident | 1937 | 1937 |
| E. S. | 32 | 1 mo. | Fell 40 feet on head 6-7 years ago | None | Hit by live wire | Dec., 1941 | Dec., 1941 |
| H. H. | 22 | 2 yrs. | None | None | Hit on head in accident | May, 1942 | May, 1942 |
| T. P. | 24 | 4 mos. | None | None | Hit by road scraper | 1927 | 1927 |
| J C. | 25 | 9 mos. | 3 automobile accidents; minor head injuries | None | Automobile accident | 1938 | None |
| M. A. | 34 | 16 yrs. | Football accident in 1926 | None | Automobile accident | Nov., 1941 | None |
| A. C. | 32 | 1 mo. | None | None | Hit on head by rock | 1924 | "Years later" |
| G. L. | 22 | 3 wks. | At age 5, piece of iron fell on head | None | Hit head on raft while swimming | July, 1941 | July, 1941 |
| A. C. | 32 | 1 mo. | None | None | Fell off wall on head | 1922 | None |
| E. Br. | 22 | 6 mos. | None | None | Hit on head | 1929 | 1929 |
| A. Bo. | 32 | 3½ mos. | At age 7 head struck in truck accident | None | Kicked by horse | 1918 | 1918 |
| J. F. | 26 | 4 das. | None | None | Hit on head | 1928 | None |

TABLE 1.—(*Concluded*)

| Length of unconsciousness | Headaches | Dizziness | Syncope | Tinnitus | Weakness | Other complaint | Rorschach V | Rorschach G | Clinical diagnosis |
|---|---|---|---|---|---|---|---|---|---|
| "Couple of hours" | Yes | No | No | Yes | Yes | "Just nervous" | Organic | | P. C. S.* |
| None | Yes | Yes | No | No | No | None | Organic | | P. C. S. |
| Semi-uncon. ½ minute | No | Yes | Yes | No | Yes | None | Organic | | P. C. S. |
| "Couple of hours" | Yes | No | No | No | Yes | None | Neurotic tendencies | | Hypertension |
| "Couple of minutes" | Yes | Yes | Yes | No | Yes | Nausea | Neurotic | | Psychoneur. (anxiety) |
| 2 days | Yes | Yes | Yes | Yes | Yes | None | Organic | | P. C. S. |
| None | "Not very often" | Yes | Yes | No | Yes | Nausea | Neurotic | | Psychoneur. (Anxiety) |
| "Couple of hours" | Yes | Yes | No | Yes | Yes | Earaches on damp days | ** | *** | P. C. S. |
| None | No | No | No | No | No | None | Schizophrenia | | Dementia præcox, mixed type |
| 4 days | No | No | No | No | No | "Just tired" | Neurotic | | Psychoneur. (anxiety) |
| 1 hour | "Always" | Yes | Yes | Yes | Yes | None | Neurotic | | Psychoneur. (anxiety) |
| "Less than 1 hour" | "Not so very much" | Yes | No | Yes | "At times" | "I get scared easily" | Neurotic | | Post-traumatic psychosis |
| None | Yes | No | No | .... | Yes | "Backache" | Normal | | Malingerer |
| "I woke up in hospital" | Yes | Yes | No | Yes | Yes | None | Psycho. personality | | Psycho. personality |
| "More than 8 hours" | Yes | Yes | No | "Once in a while" | Yes | None | Psycho. personality | | Psycho. personality |
| None | Yes | Yes | No | Yes | Yes | None | Psycho. personality | | Psycho. personality |

*Postconcussion syndrome.

**V. Rorschach showed "neurosis with anatomy preoccupation."

***G. Rorschach showed "organic."

ered as the cream of American physical standards since they are soldiers who were originally accepted for service because of their selected age group and presented no physical pathology to bar them from the military. In this group have been included cases with and without unconsciousness following injury, which is not in accord with the Denny-Brown and Russell definition of concussion. Likewise, some patients did not complain of headache; and this fact offers no diagnostic criterion, since the symptom is absent and present both in cases of postconcussion syndrome and those without such final diagnosis. Similarly, no standard can be established on such phenomena as dizziness, fainting, tinnitus or weakness. The expected ameliorative effect of time following injury apparently presents no improvement, because some patients in this group have had their symptoms persistently and continuously following injury for varying periods from a few weeks to years. A prominent feature has been the uniform response that symptoms followed the causative trauma *immediately.*

The question of headache in posttraumatic syndromes is most interesting. Various descriptive terms have been reported by many writers, and diagnostic criteria have too often been postulated on the manner in which patients describe their headaches. To begin with, as just pointed out, headache, *per se,* is not an unqualified requisite for the diagnosis of postconcussion syndrome. The writers' patients, with educational backgrounds running from a few grammar grades to university training, have resorted to delineations that in no way parallel one another. A few have complained of the "band-like stricture sensation;" others speak of the "heavy, pounding, throbbing, pulsating rhythm" of a "deep ache;" one specifically used the word "burning." The most recurrent term is "pounding and throbbing." One soldier vividly expounded on this by saying, "Sir, it feels sometimes as though two guys were up there pounding on an anvil I was holding on my head!" Others describe variations in intensity, i. e., the headache is a pulsing affair usually, but "sometimes it suddenly becomes a steady, stabbing, severe pain that lasts from a matter of minutes to hours and days." A majority of patients tell of the "pounding headache" causing them to assume a stooped posture; that is, they have the sensation that they cannot maintain their heads in the erect position.

## Method of Examination

*Clinical*—This consists of a detailed history, which subsequently includes an anamnesis obtained by the Red Cross social agencies. A complete physical examination is made of each patient followed by serological, urine and blood studies, and chest and skull X-rays. The ophthalmologist also examines each case. Soldiers' service records are consulted, when available, for details of the trauma, if the injury was sustained while in the military service.

*Psychological*—It is not possible to describe herein the minutiae or method of administration of the Rorschach psychodiagnostic method. However, there are many articles and texts, published during the past year, which will offer the reader such detailed information if so desired. Nevertheless, to recapitulate briefly, (Table 2), Piotrowski's[9] "Ten Organic Signs" are (1) Time (T) over 60 seconds for each card; (2) Total number of responses (R) less than 15; (3) Human movement (M) responses one or less; (4) Color naming (Cn); (5) Perplexity (Plx); (6) Impotence (Imp); (7) Repetition (Rpt); (8) Automatic phrases (Ap); (9) F+% below 70; (10) Popular (P) responses below 25 per cent. Piotrowski has postulated that five or more of the above signs are indicative of central nervous system organic involvement.

The "neurotic signs[10]" briefly consist of the following:

1. The number of responses (R) is not more than 25.
2. The number of human movement (M) responses is not more than one.
3. Animal movement (FM) responses outnumber the human movement (M) responses.
4. Color shock occurs.
5. Shading shock occurs.
6. There is refusal or rejection of more than one card.
7. More than 50 per cent pure form (F) responses occur.
8. Animal per cent (A%) is greater than 50.
9. The number of form-color (FC) responses is not more than one.

Although Piotrowski states that five or more "organic signs" are indicative of central nervous system disorder, no definite number of "neurotic signs" has been set forth as indicative of a psychoneurosis.

TABLE 2. CONTRASTING RORSCHACH PATTERNS OF NORMALS, NEUROTICS AND ORGANICS*

| | *Normal* (Without pathology) | *Neurotic* *signifies Miale-Harrower Erickson signs | *Organic* **signifies Piotrowski signs (If there are less than 5, but among them are *Cn, Plx, Imp* or *Ap,* suspicion of organic CNS disease is justified |
|---|---|---|---|
| **R** | 30 or more | *Not more than 25 | **Not more than 15 (reduced output in tumor) |
| **T** | No great deviation | (see color shock) | **Average more than 1 minute per response |
| **M** | The more M, the more productive the inner life. M not less than FM, (provided M is less than 5). FM should be intermediate between a high M and m column. | *Not more than 1<br>*FM greater than M<br>FM+m greater than 3M/2<br>m greater than M+FM, especially in anxiety states | **Not more than 1. (Maybe more in paresis, posttraumatic and encephalitis) |
| **F%** | 20%—50% FK+F+Fc less than 75% | Form quality much poorer in hysterias<br>*More than 50% pure form. Conversion hysteria has decrease in form<br>F+FK+Fc=75% or more | **F % below 70<br>F % 50-70 in encephalitis<br>Poor form quality in tumor<br>Large no. of F, with many F— in posttraumatic<br>F% higher than normal in tumors |
| **Color** | FC:CF:C::3:2:0<br>FC is greater than CF. Response to Cards VIII, IX, X 30—40% | *Not more than 1 FC<br>CF+C greater than FC<br>*Color shock persists on retest<br>Compensation neurosis has little color shock<br>Profound in hysteria; very profound in obsessive-compulsive states | **At least 1 Cn<br>Some pure C in posttraumatic, also having color shock which may vary on retesting |

*The material in Table 2 is a composite and condensation of the findings of numerous workers as have appeared in current literature.

TABLE 2. CONTRASTING RORSCHACH PATTERNS OF NORMALS, NEUROTICS AND ORGANICS (*Continued*)

| | | | |
|---|---|---|---|
| M: Sum C | Heavily weighted on M points to introversion<br>Heavily weighted on C points to extroversion | Anxiety states introversive<br>Hysterias extroversive<br>Obsessive - compulsive states ambi-equal but with marked coartation | Predominance of color in encephalitis<br>Tumor has constriction with ratio barely 1:1 |
| Shading | FK not more than 3<br>Fc+c+C′ usually less than Sum of C | *Shading shock, or rejection of Cards IV and VI<br>Considerable preoccupation with shading in anxiety states, less in hysterias<br>Fc+c+C′ greater than Sum of C | Absence of K and FK in tumor<br>Posttraumatic has shading shock only if neurotic element is more pronounced than organic<br>Have K and c (almost pathognomonic if more than 3) |
| Refusal | Not more than 1 | *More than 1 card<br>Hysterics frequently refuse to respond, think "it is silly," but can be persuaded to | Cannot do better "on request" |
| A% etc. | A% less than 50<br>H+A:Hd+Ad:: not less than 2:1 | *Not more than 50%<br>Especially in obsessive-compulsive states<br>Also more Hd and Ad than H and A<br>Hysterics show focus of attention on body parts in Hd, At, and Ad | |
| P% | At least 5 P responses to insure common sense necesssary for adjustment | | **Less than 25% in records—less than 25 responses |
| Rpt. | | | **Repetition — 3 similar responses within a record without regard for form<br>Perseveration in encephalitis |

TABLE 2. CONTRASTING RORSCHACH PATTERNS OF NORMALS, NEUROTICS AND ORGANICS (*Concluded*)

| | | | |
|---|---|---|---|
| Imp. | | Neurotics may have Responses are usually accurate when subjectively not good enough | **Impotence |
| Plx | | Occurs in about 2% of neurotics, with profound personality disturbances | **Perplexity |
| Ap. | | | **Use of automatic phrases |
| Approach | W (20-30%)<br>D (45-55%)<br>d (10-20%)<br>ddS (less than 10%) | Obsessive - compulsive state has many details, particularly Dr, and frequently Do | Posttraumatic has many Dr, (10-25% slight), (26-32% moderate), (over 50% severe)<br>Or else has DW's<br>Confabulation in encephalitis<br>Do in encephalitis<br>Overemphasis of W (with poor F) in tumors |
| Succession | Should not approach any extreme | Rigid in obsessive-compulsive states | Disturbed succession in posttraumatic, also in encephalitis<br>Difficulty in relating concept to blot may be one of the few signs of frontal lobe lesion |
| Retest | Should be no change | Color shock persists | Posttraumatic color shock may vary<br>Organics cannot improve performance in inquiry or testing of limits. This may be another of the few signs of frontal lobe lesion |

NOTE: *"Malingerer"*: Retest psychograms disagree. No true organic signs. Improvement on inquiry or testing of limits. Gives "expected answers" on retests.

In addition to the verbal Rorschach, the recently developed graphic Rorschach method was employed. The technique involved in its use[8] in organic, neurotic and malingering patients is briefly as follows: The performance of organic patients on the graphic reveals a marked inability to draw their concepts of the card. Hence, the final production resembles the card to the extent that it can be called "card-copy." The significant performance of the organic patient is his: (1) attempt to include details irrelevant to the concept, losing relation to the whole, (2) total indiscriminate use of the blot to include every detail, (3) intense effort toward precise reproduction, (4) automatic color matchings, and (5) absence of additions pertinent to the concept. Such a pattern of production is found in patients with severe organic involvement, whereas milder cases demonstrate their traits to a lesser degree. In organic drawings, asymmetry and spacial disorientation almost always occur, because of the patient's inability to combine his detail-interest with preservation of the part-whole relationship. His performance is further characterized by a compulsive desire to copy the blot detail by detail, frequently magnifying separate areas so as to lose the organization of the whole. There is a desire for accuracy, and no alterations, additions, or omissions occur, even when he cannot relate his drawings to his concept meaningfully.

The entire organic group displays certain common characteristics. Productions of organic patients are dictated largely or entirely by the immediate situation, so that they are unable to discriminate between the essential and nonessential. Their naming of a blot represents conceptual thinking only superficially, and they are unable to reorganize or evaluate the specific stimulus situation in terms of their concepts.

In contrast, the psychoneurotics do not exhibit any extreme degree of blot-dominance. Their performance shows less total deviation from the "normal productions" than any other clinical type, whereas the organics demonstrate, in most cases, more total deviation than any other clinical group. The neurotics tend to deviate mainly in two of the five established areas, namely, omitting details without disturbing the integrity of the whole, and inability to make supplementary additions. In the former the deviation is

toward mild concept-dominance, whereas in the latter there is a tendency toward mild blot-dominance.

The productions of "normals" are characterized by the ability to compromise between blot and concept so that the final drawing contains the essential features of both the blot and the concept.

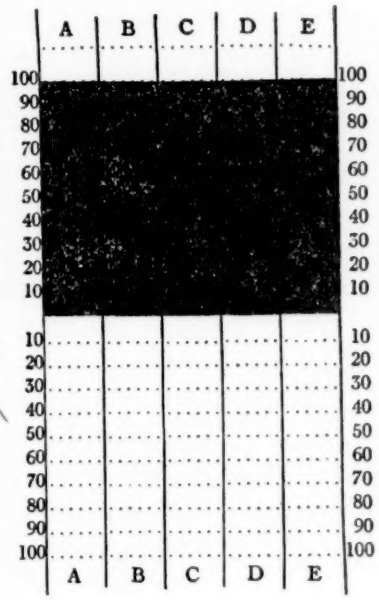
The drawings for each of the 10 Rorschach cards are scored according to the established criteria, and deviation charts are constructed. The deviation chart represents the degree and direction of divergence from the scale midpoint, (normal point). Figure 1 illustrates typical deviation charts for organics, neurotics and normals. The differences are readily apparent upon inspection. The organic pattern contains total deviation toward the blot-dominated side of the scale, (upper half), with no deviation toward the concept ratings, (bottom half). The neurotic pattern contains significant deviation in only two of the five areas, and may contain minor deviations in other areas. The "normal" chart has no significant area of deviation and the total amount is at a minimum.

Figures 2 and 3 clearly illustrate the type of drawing typical for organic patients. Both were called butterflies. These drawings, produced by two patients, have many common characteristics. Both drawings have included details which serve no function. No attempt was made to alter, add or omit any of the blot features. There was an extreme effort to copy the card as exactly as possible, even though the concept did not demand it. The patients became so absorbed in copying every detail that spacial orientation was entirely lost. In Figure 2, the patient used the exact colors of the card and attempted to match the shading as nearly as possible. The desire for matching was so strong that he also shaded in the light red areas in the black part of the card.

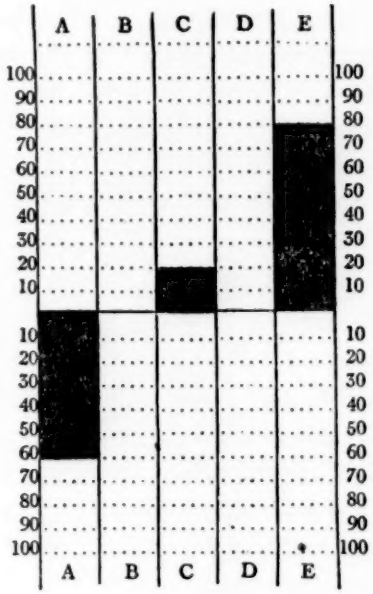
Figure 4 is a typical drawing by a neurotic. The contrast between this type of performance and that described above for the organic is quite apparent by mere observation. However, many "normals" and some of the other clinical types also may produce similar drawings. Nevertheless, the total picture, i. e., drawings for all 10 cards, must be considered and a deviation chart plotted before any final conclusions can be made. Although other clinical groups may have drawings similar to the foregoing, they are not so consistent as the neurotic group and consequently their deviation

Figure 1—Deviation Charts

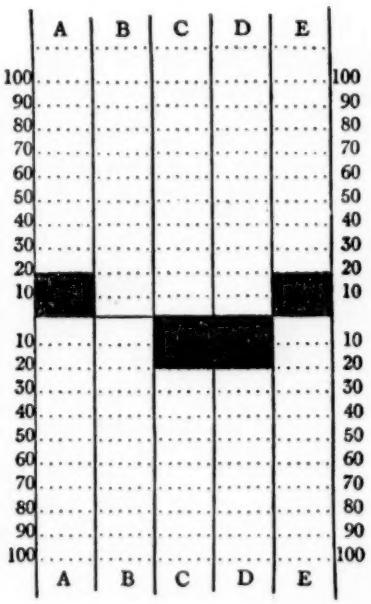
*Organic*




*Neurotic*




*Normal*



charts are entirely different. The drawing, Figure 4, was called a bat. The patient has omitted details without disturbing the integrity of the whole. He has used details and whole pertinently, and compromised between blot and concept. Color was pertinently used. There was a marked inability to make supplementary additions. The drawing appears to have additions in the nature of eyes and ribs. However, upon questioning, the patient explained that "the eyes are on the card and also there are lines suggestive of ribs."

Figure 5 can be called a typical drawing of a "normal" individual. It is characterized by the subject's ability to compromise between concept and blot. He has included conspicuous details as functional, details and wholes are used pertinently, and there is a pertinent use of color. There is one minor deviation present, and that consists of an inability to make supplementary additions. The total amount of deviation from the normal point is slight and not great enough to be considered significant of any classification except "normal."

## Results

A total of 16 consecutive admissions was studied. These cases came to the neuropsychiatric service with the referred diagnosis of "postconcussion syndrome" or "postcerebral traumatic syndrome." In other words, the regimental surgeon to whom each patient first presented himself had felt that the complaints were associated with the history of head trauma. Of particular interest, is the fact that none of the patients had suffered a skull fracture as part of the injury, a fact that finds much exploitation in law courts. The writers feel that the absence of fracture is a further challenge to the diagnosing specialist since the diagnosis of postconcussion syndrome in such cases must ultimately be based on appreciation of the patient's subjective symptomatology, his appearance, and the absence of positive pathology. There is similarly an added challenge to the Rorschach psychodiagnostic method.

Figure 2

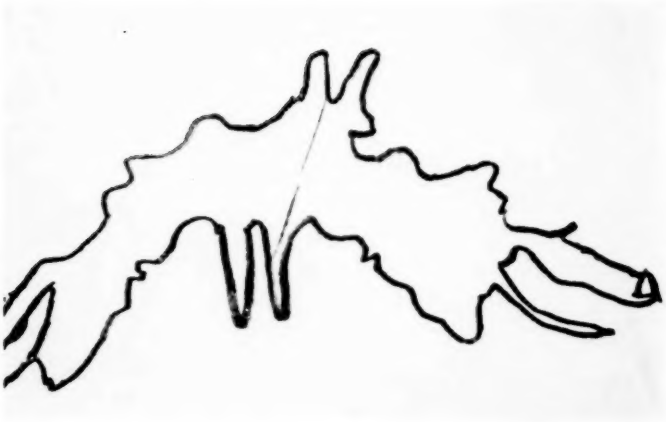


Figure 3

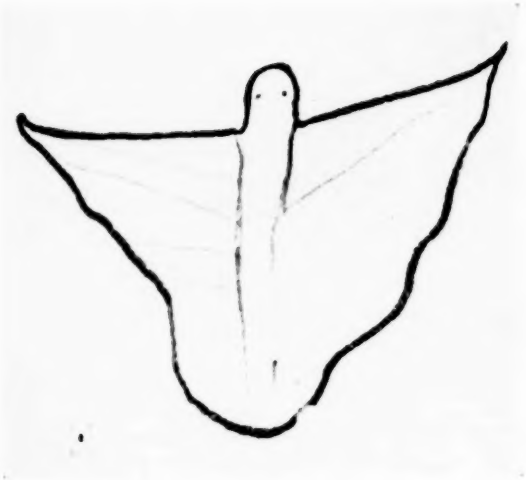


Figure 4

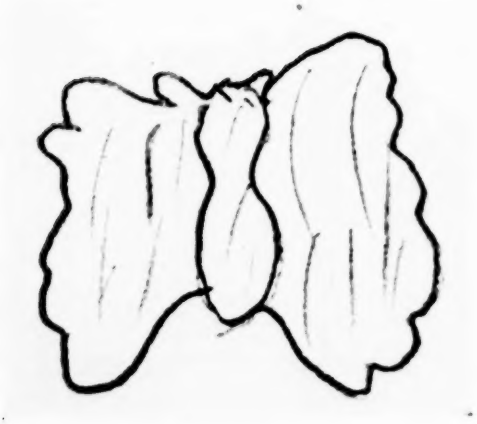


Figure 5

The 16 cases were *clinically* diagnosed by the neuropsychiatrist as follows, (See Table 3):

| | |
|---|---|
| Psychoneuroses | 6 |
| Postconcussion syndrome | 5 |
| *Constitutional psychopathic inferiority | 3 |
| Schizophrenia | 1 |
| Malingering | 1 |

The diagnoses made by both Rorschach methods were:

| Verbal | | Graphic |
|---|---|---|
| 7 | Psychoneuroses | 6 |
| 4 | Postconcussion syndrome | 5 |
| 3 | Constitutional psychopathic inferiority | 3 |
| 1 | Schizophrenia | 1 |
| 1 | Malingering | 1 |

TABLE 3. SHOWING A COMPARISON OF AGREEMENT IN DIAGNOSES BETWEEN THE CLINICAL, VERBAL RORSCHACH AND GRAPHIC RORSCHACH

*Total Number of Suspected Postconcussion Syndromes*=16

| NEUROPSYCHIATRIC CLINICAL DIAGNOSES | 100% AGREEMENT OF GRAPHIC RORSCHACH WITH CLINICAL DIAGNOSES | 93.1% AGREEMENT OF VERBAL RORSCHACH WITH CLINICAL DIAGNOSES |
|---|---|---|
| 6 Psychoneuroses | 6 Psychoneuroses | 7 Psychoneuroses† |
| 5 Postconcussion syndromes | 5 Postconcussion syndromes | 4 Postconcussion syndromes |
| 3 Constitutional psychopathic inferiority | 3 Constitutional psychopathic inferiority | 3 Constitutional psychopathic inferiority |
| 1 Schizophrenia | 1 Schizophrenia | 1 Schizophrenia |
| 1 Malingering | 1 Malingering | 1 Malingering |

†1 case clinically diagnosed postconcussion syndrome, diagnosed by verbal Rorschach as psychoneurosis.

Thus, there was complete accord between clinical and graphic Rorschach diagnoses; while the verbal Rorschach agreed in 93.1 per cent of cases. The latter disagreement was in one case clinically diagnosed as postconcussion syndrome and by verbal Rorschach as psychoneurosis.

*Official army diagnostic term for psychopathic personality.

A person who has a genuine postconcussion syndrome, or a psychoneurosis or psychosis pursuant to head injury is compensable. Therefore, the one case of disagreement between the clinician and the verbal Rorschach method is negligible so far as the legal question is concerned should such a case appear in a court of law for consideration of compensation. What judges, lawyers, and the public would like to insure is the stoppage of unwarranted compensation to psychopathic personalities and malingerers. In the present group, three cases of the former and one of the latter were clinically diagnosed as such and substantiated by both Rorschach methods!

Usually, in court cases, the diagnosis of a clinician in such instances is not only open to question and argument but is frequently belittled by an unscrupulous lawyer who has the thespian knack of impressing a puzzled jury of lay persons. However, if the psychiatric diagnosis could be confirmed by some "test," some *objective* method of investigation as opposed to the clinical deduction based upon *subjective* symptomatology, the clinician's evaluation of the case would be more cordially accepted in legal suits. Similarly, if a doctor felt that there was some question as to diagnosis and wished to "give the plaintiff the benefit of the doubt," he might offer the organic interpretation. Here, the Rorschach method is of use in dispelling doubt as to the correct diagnosis. The Rorschach will also serve as a "lie detector" when an unscrupulous physician is induced to diagnose in favor of the plaintiff. It is rather trite to state that the psychodiagnostic methods of both Rorschachs are beyond bribery, and cannot be altered by the most persuasive words of any attorney. If the syndrome is an organic involvement of the central nervous system, or a neurosis, or a psychosis, the Rorschach will easily establish that fact. If the contestant is a malingerer or a psychopath "looking for easy money," the Rorschach will again reveal the true reaction-type of his personality.

## Case Discussion

The six cases described in detail in the following are illustrative of the various diagnoses encountered in individuals claiming trauma-associated symptomatology. The true postconcussion syndromes are not herein delineated, since nothing unusual or con-

flicting was encountered in establishing their diagnoses. In all 16 cases, roentgenographic, laboratory, ophthalmologic and other studies were negative.

*Case* 1. J. C. is a white male, aged 25, born in New York, single. He finished preparatory school at 16, played "hookey" and got drunk while at school, and was arrested once for intoxication and disorderly conduct. In the army, he had been absent without leave seven times. He said, "I get the urge to drink, and so I do so." He had been court-martialed for intoxication and disorderly behavior. He usually imbibed alone. "I get fits of melancholy quite often." In 1939, he tried suicide by illuminating gas but was prevented from accomplishing his purpose. At the age of four, he suffered a skull fracture in an automobile accident. In 1936, he was in another automobile accident, and was "unconscious for about four hours." A third automobile accident in 1938 caused him "to be groggy," but not unconscious. He never held a steady job. On the day of hospitalization, he attempted suicide by slashing his wrist with a razor blade.

J. C. was disoriented for time, appeared dazed, confused, depressed, and dull. The patient denied hallucinations. The psychiatrist was certain the symptoms were unassociated with the traumata, but was unable to make a definite diagnosis. The previous history was definitely schizoid, but the picture strongly resembled a cyclothymic reaction. The Rorschach was then administered, and both verbal and graphic concurred on schizophrenia. Two days later, the patient was observed to be hallucinating; and when questioned, he said "he had been hearing his father calling to him for some time and could also feel his presence." Likewise, within the week, the patient's regression to early levels became more and more obvious, and the diagnosis of dementia præcox, hebephrenic type, was made.

*Case* 2. C. F. is a white male, aged 25, born in Kentucky, single. His previous history was uneventful and not significant. The patient had been in the service one year when he was injured in an automobile accident, suffering abrasions of the face, head and hands, with a deep laceration over the left supraorbital region. He made an uneventful recovery physically, but soon developed

nervousness, easy fatigability and a feeling of being tired regardless of rest. From time to time, he said he had "headaches which were pounding in nature." On May 27, 1942, both Rorschach methods elicited no evidence of central nervous system pathology or psychosis, but did find "neurotic tendencies." The clinician had meanwhile diagnosed the case as "not neuropsychiatric." Detailed studies discovered an essential hypertension, averaging 170/105. This was accepted by the medical consultant as the etiological factor for the headaches. The interesting finding, however, is the Rorschach rejection of organic neurological disease, without the vascular involvement influencing the Rorschach psychodiagnostic approach!

*Case* 3. J. G. is a white male, aged 24, born in Ohio, married. His previous history was essentially negative. His mother was described as "nervous," having had "several nervous breakdowns with institutionalizations." Both parents were "subject to severe headaches." This soldier had been A. W. O. L. eight times, but "didn't know why he did it." Formerly, he had been an alcoholic addict, "especially when he tended bar; but now couldn't afford it." He stated he was happily married. Five years ago, he had been in an automobile accident in which, he said his "head was knocked against the dashboard so hard it made an inch deep dent in the board." There was no skull fracture, and the "doctor told him it was just a concussion." One year ago this man began to have headaches, severe and continuous, in the frontal region, with nausea and feelings of faintness. At first, the headaches were "only a dull ache." Later, J. G. declared, the headaches became "just like the severe ones his mother and father have." Psychiatrically, the suspicion suggested by the neurotic soil upon which the patient's ego had ample opportunity of assimilating conversion phenomena as patterned by the parents, his previous unstable behavior, together with his anxiety and apprehension, led to the diagnosis of psychoneurosis, anxiety state, which was readily confirmed by both Rorschach methods.

*Case* 4. T. P. is a negro male, aged 24, born in Tennessee, single. His previous history was not significant. He had gonorrhea three years ago; it was successfully treated. He complained of head-

aches and dizziness, describing the former as "throbbing all over, usually occurring every other day," since his accident 15 years ago in which he was thrown from an automobile on his head with ensuing unconsciousness for approximately two hours. T. P. also complained of sleepiness, despite normal rest; and, after hard work, dizziness with a feeling "as though he had been drunk for a couple of weeks." This was the single case in which the Rorschach methods were at variance with one another. The question was raised if the verbal Rorschach, which indicated "neurosis with marked anatomical preoccupation" had been influenced by the gap of 15 years between the time of trauma and the time of examination. The graphic Rorschach was indicative of "organic central nervous system disease." Previously, the neuropsychiatrist had established the diagnosis of postconcussion syndrome. This, in itself, also evokes the query as to the fixity of symptoms over such a long period without cessation, alteration or aggravation of complaints.

*Case* 5. G. L. is a white male of 22, single, born in New Hampshire. His previous history was essentially negative. On admission, he stated, "For the past few months I have been hearing voices. I don't recognize them, but they are men. If I get scared, that's when I hear it like . . . just like danger or something like that. Once in a while I hear my mother calling me. Once in a while I see . . . well, different people or things like that." He had no delusions, ideas of reference or persecution. Previously, he had had two injuries to his left leg; but, in the summer of 1941, he fell on his head on a diving board and was unconscious for 15 minutes. Since that time, he has suffered with slight headaches, with sharp pains on the left side of his head. The auditory hallucinations began almost immediately after the injury was sustained. Neurologically, the left palpebral fissure was larger than the right, as were the pupils. The tongue protruded to the right. There was right oral weakness with generalized hyperreflexia. The psychiatric diagnosis made was posttraumatic psychosis. The verbal and graphic Rorschachs indicated both the organic and psychogenic nature of his syndrome by presenting three organic signs with strong neurotic indications.

## The Legal Aspect

Few, if any, phases of litigation involving claims for compensation for personal injury, have given rise to more controversy than that dealing with posttraumatic psychoneurosis. This is understandable when the conflicts which exist in the ranks of medical authorities on the subject are considered.

With the nation going on an "all-out" war footing, and the likelihood that most able-bodied males between 18 and 45 will soon, or eventually, be in the armed forces of the nation, while the rest will be employed in war industries, and with the prospect that a very large percentage of those in the armed forces will probably be engaged in combat, it is reasonable to expect, based on the experience of World War I, that this problem will assume ever-increasing importance. It will become a matter of great concern, not only to the claimant for compensation or pensions, but also to lawyers, doctors (civilian and military), jurists, insurance companies, and industry and society in general. With millions of our men engaged in armed conflict, the prospect of the increase in the number of cases of posttraumatic psychoneurosis which can be reasonably anticipated as an aftermath of the war, based upon past experience, is a matter of some concern to both legal and medical professions. These cases will come in the form of claims against the government for disability and pensions. They will come in the form of claims for compensation for injuries arising out of and in the course of employment from men returned from the armed forces to industry. They will come in the form of claims from men discharged from the armed forces who will meet with personal injury in automobile, railroad and other accidents too infinite in variety to enumerate. The problem obviously assumes no mean proportions.

A lawyer for a plaintiff or claimant in an accident case or compensation claim, in which the possibility of the existence of a posttraumatic psychoneurosis is indicated, is confronted with several questions, the answers to which he must seek from the medical profession. The army and navy medical officer will be confronted with the same problems. Is there a neurosis? If so, was the trauma the proximate cause thereof, or did a preexistent mental or nervous condition cause the accident resulting in the trauma? If

the neurosis followed trauma, was it due to a latent preexisting condition which the trauma brought into the open, or was an existing condition aggravated by the trauma? These questions with which a lawyer is confronted at the outset of the litigation must ultimately be resolved by a judge and jury; and, just as in the first place the lawyer turns to the medical expert for light, so ultimately the judge and jury must depend upon the medical expert for the facts and opinions upon which to base the judgment of the court. When one turns to the medical profession for light, he finds disagreement and sometimes acrimonious conflict.

How far can and should the trier of facts go, in litigation involving personal injuries, in accepting the testimony of so-called medical experts? This question is peculiarly in point when injuries are claimed where no objective symptoms can be shown, as is so often the case where traumatic psychoneurosis is involved.

That the law must look to and rely upon medicine for guidance in this field of human endeavor, goes without saying. "Medical science and experience make possible a judgment as to whether symptoms . . . are real, imaginary or feigned, that would not be possible to a layman witnessing the medical examination, much less to a lay jury hearing from witnesses what was said or done." (*Campanale v. Met. L. Ins. Co.*, 194 *N. E.* 931 *Mass.*)

The courts recognize that medicine is far from an exact science and that at the best "its diagnosis is little more than a guess enlightened by experience," *Griswold v. N. Y. C. & H. R. R. R. Co.*, 115 *N. Y.* 61 (1889); and that the chances of recovery in a given case are more or less affected by unknown causes and unexpected contingencies. Nevertheless, courts will accept the medical judgment if it rests upon reasonable probability strong enough to justify the formation of an opinion.

Every lawyer and judge who has had any experience in the trial of personal injury cases knows the evidential value of objective testimony, no matter how slight, and the difficulty of impressing a jury with a claim based upon purely subjective symptoms, no matter how meritorious. The plaintiff's lawyer who can flash an X-ray before a jury, showing a skull fracture, feels his case is more than half won, while his adversary is already making mental calculations of the amount of the verdict, despite the fact, as to which there

seems to be agreement in the medical profession that severe mental disorder may result from brain trauma without any damage to the skull. A direct blow to the skull may cause concussion of the brain; an indirect blow suffered by a fall on the buttocks may cause a concussion which may result in grave brain or nerve trauma; and there is competent authority for the view that a psychoneurosis may follow trauma when there is neither fracture nor concussion.

Dr. James H. Huddleson in his book "Accidents, Neuroses and Compensation," says, "Cerebral concussion can be independent of traumatic neurosis, in that either may occur without the other. They occur together frequently enough, when it is impossible to say that the concussion has not participated in causing the neurosis. Physical concussion effects tend to pass off; if symptoms persist instead of decreasing, psychic influences are at work. The most severely traumatized develop the mildest neurotic reactions. (This view is supported by many eminent authorities including Kennedy, Slater, Fetterman, Oberndorf.)

"The belief that the severity of the post-concussion neurosis ought to increase with the severity of the concussion is not necessarily in conflict with the other opinion that well marked traumatic neuroses on the whole decrease in frequency the more severe the traumata involved, since cases of concussion make up but a fraction of the entire group. Traumata need not be severe nor cerebral to be effective. Some physicians have reported a greater incidence of neuroses in cases of concussion without fracture than in cases with fracture."

Dr. Roscoe N. Gray in his "Attorney's Textbook of Medicine" (1940), says, "The after effects of fracture and other major brain injury are of cardinal importance because of their frequency, far reaching results and resistance to treatment. English concluded that about 39 per cent of head injuries fully recover, while 46 per cent have slight difficulties over a long period of time not sufficient to interfere with work, 14 per cent are unable to work for some time, and 10 per cent suffer permanent mental impairment.

"The element of hysteria and exaggeration, or wilful malingering is not infrequent. Following accident, the head injury is sometimes used as an excuse to avoid the unpleasant difficulties of life

and the necessity to work. However, there can be little doubt that brain damage may definitely lead to easy fatigue, both mental and physical.

". . . Fracture of the skull is either a condition of relative minor consequence with rapid recovery free from sequelae, or of major magnitude frequently leading to death or permanent disability.

"The fracture itself usually leads to but few changes and complaints. It is the damage to the soft structures within that makes fracture of the skull a thing of major importance. . . . The degree of brain damage varies greatly from minute hemorrhage of little significance, lacerations upon the surface or deep within, to complete pulping of major proportions.

"This may occur in so-called silent centers with little or no effect, while the destruction of small areas of vital importance may lead to obvious symptoms of great variety."

In his work on "Accidents in Their Medico-Legal Aspect," (London, 1910), Douglas Knocker says, "Nowadays it is recognized that after injuries (traumatic) or shock, four classes of conditions may arise, viz.:

"1. Actual structural or organic changes in the central nervous system.

"2. Traumatic hysteria which is the consequence of injury.

"3. Traumatic neurasthenia.

"4. Traumatic psychoses, or morbid mental states.

"It is almost impossible to be certain in many cases whether or not actual structural damage has been done to the central nervous system. In all of the last three conditions mentioned above, there may or may not be structural injury to the brain, for they can be produced in consequence of injury to the body which does not cause any actual structural or organic change in the central nervous system. So that although a simpler division may be made of two classes—(1) where actual structural damage has been produced; and (2) where no such damage is discoverable—yet the symptoms which occur in the second case, and which are purely mental, are indistinguishable from those where evidence appears that actual damage has occurred.

"In a great many cases the presence of actual structural damage is clearly indicated by loss of sensation, paralysis, etc., . . . and so we will first deal with section 1, remembering all the time that much or all of what is described below can occur without any proof of injury to the brain."

An eminent medico-jurist, Dr. George I. Swetlow, in an article in the "N. J. Law Journal" (*N. J. L. J. Vol. LX, No.* 50, Injury and Disease, Dec. 16, 1937), writes, "As a result of a blow to the skull, the brain within may be traumatized. It must be remembered that brain damage can be present with or without a fracture. Lawyers place too great importance upon the presence or absence of a skull fracture as demonstrated by X-ray. This aspect of the problem is of minor importance. One's attention should be directed to the presence or absence of brain damage. It is entirely possible that one may have an extensive fracture with no brain damage and little or no disability, while, on the other hand, there may be no fracture, yet the brain damage may be severe, and the disability total and permanent. The degree of the brain damage varies. In some, it is merely a 'shaking.' This is a theoretical concept. In those in whom unconsciousness follows the trauma, hemorrhages, contusions and lacerations of the brain occur. As a rule, the more protracted the unconsciousness is, the greater is the brain damage. With the brain damaged, disabling sequelae usually follow. Marked intellectual and emotional disturbances are common, along with these, the patient complains of headaches, vertigo, insomnia, ringing in the ears and marked fatigability. Although it is a fact that any one of the symptoms mentioned may be seen in people who have sustained no injury, yet the presence of several of them in a person who has had a head injury is very significant. All or some of the sequelae may be of long duration or permanent. The disability that follows may be partial or total. At times, as a result of brain damage, epilepsy develops. Convulsions may appear for the first nine months and even years after the original injury. The irritation of the brain by the scar tissue that forms after the injury causes the convulsions."

He goes on to say that even when the trauma is not the direct cause of a mental disorder, it may precipitate a latent condition, and that "there are two important mental disorders which are

often precipitated by trauma: schizophrenia or dementia præcox and manic-depressive psychosis. . . . The severity of the blow and its location are less important than the emotional shock experienced at the time of the accident."

Dr. Emil Kraepelin in his "Lectures on Clinical Psychology" (3rd Eng. Ed.), says, "From this want of objective signs (in a certain case of head injury) the whole malady so completely wears the features of psychical origin that the suspicion may even arise as to whether there may not be intentional malingering with the object of obtaining the highest possible compensation for the accident sustained. This question of shamming in psychical affections following accidents has become of great importance, owing to our legislation, and has led to a zealous search after objective demonstrable symptoms in disturbances of that kind, though certainly with little result so far, since they have been looked for exclusively in the neurological province. But the complaints brought forward by our patient correspond as a whole with those which might perhaps also be brought about by tormenting anxiety. Therefore they point to their originating from morbid frames of mind. Indeed, the emotional shock—the fright—doubtless plays the chief part in these clinical manifestations, accurately described by Oppenheim under the name of Traumatic Neuroses. This also happens even if there has been no sort of injury to the head, and, indeed, if there has been no accident at all, but merely the imminent danger of one. This explains the fact that, apart from accidental concomitant appearances of real injuries, only such symptoms occur here as could be caused by emotional agitation. Hence, one will never be able to find out, from a purely physical examination, reliable symptoms of the latent malady, which might not have been invented after all.

"We are in a measure protected from being deceived by malingering by the uncommonly rare condition taken as a whole, which shows a continual emotional restlessness, with its effects upon our patient's capability for work, on his pleasure in life, on his mood, and on his physical doings, sensations, movements, daily routine, and so on. As it would appear, this emotional disquietude is to be regarded partly as the after-effect of the violent emotional shock, but also partly as the effect of the 'struggle for an income' which so often, in the most torturing forms, follows an accident. The not

unfrequent cases in which a substantial improvement of all disturbances sets in with the certainty of an income is at least in favor of this last opinion. When that is the case one is apt to suspect that there has been a question of premeditated dissimulation with an object.

"The psychical method of investigation can alone lead in the right direction towards meeting this suspicion, and finding out a way which will afford a so far reliable insight into the diseased mind. I have already, in a number of cases of that nature, had the behavior of patients accurately tested by making them add up one continuous column of single figures, and by other simple experiments of the same kind. These methods, the particulars of which I cannot go into more minutely here, have the great advantage that they yield results by which any wilful dissimulation becomes at once distinctly recognizable. Experiments to this end have proved that it is quite impossible, even for those who are accurately acquainted with the governing laws in this department, to wilfully counterfeit the particular morbid disturbances here presented. In the way indicated we have tried to form an opinion as to how far the complaints of our patient are justified with regard to the diminution of his capacity for work, and it has been shown by this means that as a fact he possesses an exceedingly small capacity for mental work as well as an undoubtedly morbid increase of liability to fatigue. It should scarcely be difficult to apply tests of this kind to other departments of mental action, especially as to capacity of comprehension and attention, as to skill, power of recovery, divertibility, and so on. As, in investigations of that kind, wilful deception always betrays itself through deficient agreement of the results one with another and with other experiences, they present throughout the possibility of attaining to entirely assured results.

"The fact that traumatic neurosis, or, as I might rather call it, 'fright neurosis,' is recognized as being of psychical origin, has brought it into such close relationship with hysteria that, following the example of Charcot, cases of that kind are often allocated to that disease without due consideration. In this way one starts with the idea that the latent hysteria would to a certain degree be brought to light through the accident. No doubt hysterical disturbances can be set free through accidents. Yet it seems to me the

picture of disease just now developed so essentially deviates from hysteria in its mode of origin, clinical expression, and course, that I cannot hold that simply to mix the two would be an advantage. Rather am I convinced that a more accurate knowledge of disturbances set free in a psychical way, as well as a more accurate knowledge of real hysteria—which latter is characterized by a permanent inclination to psychogenic symptoms of various kinds—will lead us to distinguish from it a number of more or less analogous forms in which the origination of the morbid changes would probably take place in an essentially different way from that which we see in hysteria."

Thus, the problem of the physician and of the lawyer and court is further complicated by the opportunity for malingering, which the possibility of the existence of a neurosis without objective symptoms affords.

As is so well said by Dr. James H. Huddleson, "Malingering and neurosis appear to be inextricably interwoven. Any symptoms complex may be simulated. Detection of the facts in any case of suspected malingering depends upon its investigation as a whole and the employment of all special tests useful in differentiating structural from non-structural disorders. There is no one thing that will differentiate conclusively malingering from neurosis. Exaggeration is more difficult to ascertain than malingering. It is difficult even to define.

"Differentiation of traumatic from other neuroses is largely a matter of definition, each author using his own criteria. So long as a traumatic neurotic has a law-suit pending, so long as he continues to be a claimant for compensation, he is practically incurable. He can be improved by various forms of treatment other than legally closing his case, but very rarely cured. When compensation is in no way involved, recovery is surer and speedier."

The great problem of the medical expert and, of course, of the courts is to distinguish between the real and the simulated neurosis and to expose the latter for what it is.

Dr. Alfred W. Herzog ("Medical Jurisprudence," 1931) a medical writer who uses the term "traumatic hysteria" for "traumatic neurosis," writes that, "The ignorance of many physicians concerning hysteria often results in great injustice to a person who has

developed a paralysis or other disabling condition in consequence of an accident. It is often very difficult to differentiate between organic paralysis and a hysterical paralysis; and as far as the patient's suffering therefrom is concerned, there is not the slightest difference in the result or in the disability, while the paralysis persists. It is easy enough for the so-called experts for the insurance carrier, representing the employer, to state that 'this man is not paralyzed, he only thinks he is;' yet when a man cannot raise his right arm, he cannot raise it, no matter what the cause may be. The usual treatment and usual form of examination given to a hysterical individual by those who are not fully versed and well founded in suggestion and its applicability to the treatment and cure of hysteria, is generally such as makes conditions a great deal worse and a subsequent cure proportionately more difficult. . . . In many of these cases physicians examining the plaintiff or claimant will not be able to discover any organic cause to account for either the paralysis or loss of function of the special senses, and so, whether through ignorance of the nature of hysteria or through deliberate intention to secure a judgment for the defendant at all hazards, the medical experts for the defendant or the insurance company representing the defendant, give testimony claiming that the plaintiff is malingering. . . . The principal points which interest us medico-legally are the differentiation first, between hysteria and malingering, and second, between hysteria and some of the conditions which it imitates. Where it is found that a person is malingering and is not also suffering from the effects of an injury complained of, the judgment should naturally be in favor of the defendant. . . . Where we may exclude malingering and we only have to differentiate between a hysterical paralysis, a hysterical loss of function, and the same manifestations not due to hysteria, the principal medico-legal reasons for such differentiation will lie in the fact that hysterical blindness, hysterical paralysis or any injury to the plaintiff's health caused by the trauma, if due to hysteria, is likely to disappear suddenly while those effects not caused by hysteria, effects which are not purely functional, are likely to be permanent. . . .

"Whether a person suffers from disability or pain through hysteria or auto-suggestion which has been set in motion through an

accident, or whether the condition is due to some organic disease caused by the accident does not make the slightest difference in the result to the injured person. This should not be forgotten by the attorney either for the plaintiff or defendant, no matter what the disease may be called, whether traumatic hysteria, traumatic neurosis, or any other name. The question is always, 'is there or is there not that disease manifestation of which the plaintiff complains?' The fact that a physician cannot see any cause for these manifestations is no proof that these manifestations are not present. . . .

"After all, the difference between what we call an 'organic' and what we term a 'functional' disorder is only that in the latter we have as yet failed to discover it. We, therefore, class a nervous disorder as a functional disorder, not because we know that it is purely functional, but because we do not know its organic cause. To deny, however, an organic cause to a disorder, because we have not as yet discovered it, would be as illogical as to claim that a road leads nowhere, because we have not as yet followed it to the end. There is an organic cause for everything—there is no purely functional disorder."

Our courts and workmen's compensation bureaus are and will continue to be, as will also, in due time, our veterans' bureau, deluged with claims for compensation for neuroses of various sorts and degrees, many undoubtedly meritorious, but many more motivated by what appears to be the prospect of "easy money"—easy because it is to be found in a realm in which the laymen, who include the lawyer and judge, as well as jury—are in a fog, through which they can only be led by the medical expert. In this field, the legal profession has often looked to the medical profession in vain. The results have sometimes been fantastic. Good fakers represented by "smart" lawyers and aided by glib medical experts have succeeded in bemusing juries into rendering astronomical verdicts, while meritorious claimants less gifted with thespian skill and unable to engage high-priced professional talent, have left the court room empty-handed.

Dr. David Edward Hoag, eminent neurologist, in an address before the Society of the Medical Jurisprudence, New York, (October 11, 1920, published in "The Medical Times," December, 1920), said,

"Indemnity sought for material injury such as loss of eye or arm, or leg, broken skull or spinal column, with definite objective symptoms, is legitimate, but one must stand appalled today at the wholesale litigation based upon alleged or actual injury, where the physical evidence is slight or absent, yet where nervous and permanent damage to the mind, health, and body are claimed . . . This very situation places upon the medical profession a tremendous responsibility, whether serving as a physician to a claimant or as expert, so-called, in court, where the justice and extent of his claim is to be determined . . . Juries become bewildered after listening to evidence in which truth is stretched to the breaking point. . . . Farces are enacted daily in our courts of justice. Ignorance and injustice masquerade as science. Decided opinions are given after a single examination of claimant . . . .Loose methods being employed, the courts of law, the legal profession and the laity from which juries are gathered are already strongly impressed with the unreliability of the so-called 'expert' testimony. . . . In addition to the stereotyped form of traumatic neuroses, so-called, there is a kind—born and nurtured in the days following accident, engendered by pique, spite, anger or revenge—led on by the golden dreams of avarice and a liberal jury verdict—an amount often out of all proportion to the thrift and earning capacity, as shown by the previous mode of life."

As Dr. Gray says, "The importance of hysteria is particularly in its common manifestation, traumatic neurosis. It is most difficult for the conscientious doctor to determine whether the patient is fooling himself, sincerely believing that his elbow is stiff, or whether he is trying to fool the doctor, and is therefore a malingerer. Thus hysteria, with its common variety, traumatic neurosis, is of cardinal importance to the doctor and attorney in differential diagnosis from malingering. The frequent occurrence of hysteria coincident with malingering, further complicates the problem, sometimes beyond the physician's ability to separate the one from the other. The cardinal point to be remembered is that a traumatic neurosis, or hysterical patient, definitely fools himself, while the malingerer is endeavoring to fool those about him. The threshold limit of the neurotic is so lowered to outside stimuli that he misinterprets cause and effect, believing himself sick when well . . .

Malingering is a tempting diagnosis to make when the surgeon is unable to bring about a recovery . . . There is no positive test (for malingering) absolutely excluding all other conditions. Only through the most careful study leading to actual proof of fraud, may the conclusion be reached that the patient is a malingerer. It is not a disease, thus symptoms are absent . . . The line between malingering and hysteria is very fine indeed."

Dr. Pearce Bailey in his book, "Diseases of the Nervous System Resulting from Accident and Injury," New York, 1906), says, "There is now a nearly complete unanimity of opinion that there is no such thing as a special neurosis excited by trauma. Injury and shock may be followed by symptoms of any of the well recognized neuroses or psychoses, or the symptoms of one or more of these disorders may be blended in the same case; but the theory of a special traumatic neurosis lacks clinical foundation and has been generally abandoned.

"Even the severe forms of nervous disturbance which sometimes follow injury, the observation of which led Oppenheim to coin the term 'traumatic neurosis' do not need to be explained by assigning them to a special neurological place of their own . . . Both clinical and social factors render traumatic hysteria, when it is the subject of a personal injury claim, the most difficult of all diseases to be interpreted with judicial fairness. Even when every suspicion of dishonesty on the part of witnesses, experts or otherwise, is eliminated, the difficulties standing in the way of arriving at a fair adjustment or verdict are very great . . . The jurors may be convinced of the honesty of all the views they have heard expressed, and yet they are unable to determine from the character of the testimony which of the opposing opinions is the more likely to be correct . . . the prognosis of any individual case of hysteria demands a psychological study of the individual rather than a single enumeration of the physical manifestations he may present.

"These factors in the prognosis of traumatic hysteria in America are only of value in non-legal cases or in legal cases when the law question is at an end; for with pending litigation hysterics improve little or not at all. It is the legal delay, usually of two years or more, which is largely instrumental in making hysteria a chronic affectation. With legal questions out of the way, with no marked

predisposition, and with the patient still in the active period of life, substantial recovery may confidently be looked for in the vast majority of cases, although not in all."

"It makes very little difference whether the pains which the plaintiff suffered were actually existing to the extent that he thought, or whether his nervous system was so affected that he believed them to exist to a greater extent than they actually did, and suffered accordingly, if the nervous condition was caused by the accident which produced the pain" (*Dieffenbach v. N. Y., etc. R. Co.*, 5 *App. Div.* 91 *N. Y.*)

The element of speculation arising from the uncertainties and hazards of a trial by jury, further complicated by the power of appellate tribunals to override verdicts of trial courts, when the appellate judges disagree with the jurors in their appraisal of the medical testimony, give point to the desirability of bringing some semblance of agreement into this controversial field, and the need for some generally accepted standards and methods in psychological and neurological technique.

Even after a judge and jury have evaluated the conflicting testimony of medical experts, pro and con, and have arrived at a verdict, one judge in an otherwise evenly balanced appellate court, may upset the judgment of the 12 jurors—a not unusual occurrence.

While no two cases are identical in their facts, an indication of the diversity of views entertained by different courts in cases involving traumatic neurosis may be gathered from a few of the recorded cases:

A recovery of $13,500 by the manager of a packing house, who was only away from his work for three months, where the physician merely testified that the plaintiff was suffering from a neurosis, was upheld. The court expressed the opinion that it was excessive, but would not set it aside, as it was considered to be a matter purely for the jury to determine (*Nagle v. Cudahy,* 112 *Kansas,* 289, 1922); as was also a verdict for $11,500 for a young girl, where the testimony was that the recovery from the neurosis was uncertain, although there was no permanent physical injury (*Boyle v. Phila. R. T. Co.,* 286 *Pa.* 536, 1926); likewise verdicts for $30,000 (*Morris v. International R. Co.,* 159 *N. Y. S.* 993); $62,500 (*Lindeman v.*

*San Joaquin Cotton Oil Co.*, 43 *P.* 836, *Cal.*); $48,750 (*Witkin v. Beckwith*, 264 *N. Y. Supp.* 160); $35,000 (*Odsen v. Moore*, 249 *N. Y.*, 558); $25,000 (*De Salvo v. Stanley*, 281 *N. Y.* 333); (*Garthe v. Ruppert*, 264 *N. Y.* 290), were sustained.

In one case, a verdict of $7,500 (*Summerskill v. Vermont Power etc., Co.*, 91 *Vt.* 25, 1915) was upheld where it was shown that there was an impairment of the capacity to work due to an uncontrollable dread in the presence of high tension wires.

On the other hand, in the case of a locomotive fireman, the court expressed a doubt whether his physical injury was the cause of the neurosis, and because of the doubt, reduced the verdict from $5,000 to $3,500 (*Fry v. Great North. R. R.* 95 *Minn.* 87); in another case, a verdict of $25,000 was reduced to $10,000 because of the unsatisfactory medical testimony (*Ringleman v. Oscar Daniels Co.*, 165 *N. Y.*, 1109); and in another case, a verdict of $10,000 was reduced to $4,000 because of the conflicting testimony as to the probable duration of the traumatic neurosis (*Becker v. Albany Ry.*, 54 *N. Y. S.* 395).

In another case, a $13,000 verdict was reduced to $5,000 even though there was testimony that the neurosis was likely to result in paralysis (*Swann v. Chi. R. I. & Gulf R. R. Co.*, 127 *S. W.*, 1164, *Tex.*). In this case a physician testified that only about 50 per cent of the number of persons suffering from traumatic neurosis recovered, and in view of the fact that the plaintiff had suffered with it for two years, he did not think she would recover. Another medical witness in this case testified that patients suffering from traumatic neurosis get gradually worse and worse until finally they become paralyzed and die. Later on, he testified that some get well. "I have seen some miraculous recoveries from that trouble after a judgment rendered against a railroad," he said.

In another case (*La Pleine v. Morgan etc. R. R. & SS Co.*, 40 *La. Ann.* 661), although the child plaintiff suffered a severe nervous and mental impairment, the court was in doubt whether her condition was due entirely to the injury suffered in the accident, or was the aggravation of a latent hysterical diathesis. If there had been no doubt, the verdict of $7,500 would not have been considered excessive. Because of the doubt, the court reduced it to $5,000. There was testimony in this case that the mind was seriously affected, and that the recovery was improbable.

In another case, in which a woman 32 years of age, earning $600 a year, was awarded $26,000, (*Waterman v. Minn. St. P. & S. Ste. M. R. Co.,* 26 *N. D.,* 540), in the opinion of the appellate court, the weight of the testimony indicated the probability of a cure, and therefore, the verdict was set aside. In this case, the judge who wrote the opinion in the appellate court stated, "The medical witnesses practically all agree as to the nature of her ailment, but there is some conflict in their testimony as to the probability of a permanent cure. The weight of such testimony would appear to support appellant's contention. Of course, such testimony consists of mere opinion, entitled to little or much weight according to the various experts' information upon the subject upon which such opinions are expressed. It is no doubt true that we cannot weigh the testimony for the purpose of determining which is entitled to the most weight. That was the province of the jury. We refer to such conflict merely to emphasize the fact that a conflict in opinion evidence is somewhat different, and should be viewed in a somewhat different light from that arising in testimony dealing with facts . . . The burden which rests upon the plaintiff of proving, to a reasonable degree of certainty, the permanency of her injuries, is established, if at all, only by the opinions of experts . . . From our point of view, a dispassionate consideration of the entire testimony leaves the nature of the plaintiff's injuries, insofar as their permanency is concerned, in at least considerable doubt . . . The verdict is to our minds, so glaringly excessive and unauthorized by evidence as to compel the conclusion that it must have been arrived at through passion or prejudice."

In another case, (*Kilmer v. Reckitt,* 77 *N. Y. S.* 395), the appellate court reduced the verdict from $7,000 to $3,000 because it was considered excessive on the evidence as to the permanent injury to the nervous system that could reasonably be anticipated; and a verdict of $12,000 was reduced to $4,000, (*Schwartzbauer v. Gt. North. R. R. Co.,* 112 *Minn.* 356); and a $6,000 verdict was reduced to $2,000, (*Mueller v. Miss. & K. Tel. Co.,* 191 *Mo. App.* 118).

In the case of *Larsen v. Russell,* 45 *N. D.,* 33, there were six medical experts—three for the plaintiff and three for the defendant. The experts for the plaintiff testified that the plaintiff was paralyzed and that the paralysis was due to traumatic neurosis. The experts

for the defendant testified that she was simulating her symptoms and was suffering from hysteria due to auto-suggestion. This lady was brought into court on a stretcher. It was claimed that she had not been able to move for two years and her appearance in court made a profound impression on the jury. She was 22 years of age and was earning $25 a month and board as a domestic servant. The case was known as the "Sleeping Beauty" case. She was awarded a verdict of $26,000. On appeal, the court refused to set the verdict aside. The majority opinion said in part, "In the light of present standards and on the record before us, the majority of this court is of the opinion that it is not warranted in saying that the jury was imposed upon in the instant case."

One judge dissented. He thought the jury had been imposed upon. In his dissenting opinion he said, "Cases of this kind are *sui generis*; whether under such state of facts, the injuries are permanent is a matter of speculation under all medical authorities and in accordance with the researches of medical science. The 'simulation' mentioned may be actual, that is pretended, or unconscious, that is real. In cases of this character the hysterical element, the evident pain and suffering may be partially at least, due to the litigation, to introspection, to auto-suggestion, even to suggestion from without . . . Whether she is permanently injured rests entirely upon the opinion of experts."

This judge was strongly of the opinion that it had not been satisfactorily established that the plaintiff was actually suffering from traumatic neurosis and vehemently argued for a reversal. Later, on a rehearing and new evidence, the verdict was set aside.

In the case of *Scott v. Astoria R. Co.*, 72 *P.* 594 (*Ore.*), the court said, "The practice of medicine and surgery is changing so that what formerly was regarded by the profession as settled has become in many instances obsolete."

The reverse is also true in the sense that what a few years ago was considered visionary is now accepted as commonplace and as the judge writing the majority opinion in the Larsen case said, "With the development of medical science it may become possible to set up more satisfactory standards for the diagnosis of nervous disorders; and this may in turn result in preventing imposition upon courts and juries such as occasionally occur."

It is a matter of universal practice now to require the plaintiff or claimant to submit to a physical examination by the defendant's medical experts or by experts appointed by the court and the results of such examination and of any tests made upon the plaintiff may be shown at the trial. If a reasonably reliable and generally accepted (by the medical profession), objective test, such as the Rorschach psychodiagnostic method, were available, to help courts and juries and compensation referees determine whether a claimant is suffering from a neurosis; or is malingering, and that the neurosis, if any, is the proximate cause of the trauma upon which the claim for compensation is predicated, a great advance will have been made in the administration of justice in this vexatious field of litigation.

## Summary

1. The question of the diagnosis of postconcussion states has been considered from the neurological, psychological, legal, civilian and military angles.

2. Cases have been cited, both clinical and legal, to illustrate the results in which these syndromes perforce diagnosed solely on subjective symptoms, permit malingerers to consummate fraudulent claims of impairment and disability while, on the other hand, individuals suffering with postconcussion neuroses and allied states, have been denied rightful recognition of their claims and refused compensation.

3. Because of the current emergency, it is anticipated that many cases of concussion will result both in the military services and in the civilian industries, entailing much litigation in our courts of law. To prevent those justifiably deserving monetary compensation from being deprived of their meritorious rights and, conversely, to forestall wholesale mulcting of governmental and insurance funds by malingerers and unscrupulous claimants, it is obvious that some *objective* method of examination should be available to the medical and legal professions to determine the status of these individuals with postconcussion syndromes.

4. In view of the extreme success with which the Rorschach psychodiagnostic methods, verbal and graphic, have been employed in the differential diagnosis of these states in the neuropsychiatric service of the Station Hospital at Fort Dix, N. J., these methods of investigation are offered as the solution to the problem of correctly diagnosing postconcussion conditions.

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# REVIEW OF A YEAR OF GROUP PSYCHOTHERAPY

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The apparent success of the various shock therapies introduced to psychiatry in recent years has unfortunately lessened the emphasis upon psychotherapy, in that the results achieved under shock treatments are so striking and dramatic. Further studies and cumulative data on the "cures" effected by these treatments have tended to dampen the original enthusiasm, as the results have largely been proved to be rather short-lived.

Under these circumstances, psychotherapy again assumes a more important rôle in the psychiatric care of patients. In state hospitals, the case load is so great and the routine burden on the physician so considerable that there is scarcely any time for individual psychotherapy. Group psychotherapy answers the needs of this situation by making possible the continued psychotherapeutic approach to the largest number of patients with a maximum economy of time to the psychiatrist.

Such group therapy has assumed increasing importance and has been practiced with success in various centers. In some cases, psychoanalytic concepts have been employed, as exemplified by Dr. Paul Schilder and his coworkers, or in a modified form by Dr. Louis Wender at the Hastings-Hillside Hospital. Dr. A. A. Low at Illinois Research Hospital, employs an interview method which he has found quite satisfactory. Dr. Ira Altschuler at Eloise, Michigan, employs a rather varied program, including music, rhythms, psychoanalytic concepts, daily slogans and the like. This merely emphasizes the fact that the subject matter is less important than the manner in which the therapy is administered. The method which is about to be presented confines the activities of the group to a uniform, simple situation which is sufficiently flexible, however, to permit the most varied application. It is a method which is at the same time a means of examination and a procedure for group psychotherapy. Its uses in both respects will be considered here.

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The customary psychiatric evaluation of a patient centers about his verbal responses. One can elicit delusional ideas, ideas of reference, ideas of persecution or grandeur and the like. An additional background for psychiatric evaluation centers about deviations in behavior, facial mannerisms, untidiness in habits, muteness, lack of spontaneity in movement, lack of interest in any useful task, etc. The emphasis in the present study is upon behavioral deviations as evidenced in a simple test procedure. The writing of the alphabet is employed to serve, not as a measure of literacy, but as a simple act well within the intellectual capabilities of most patients. The conditions under which the act is performed are varied.

It is recognized that the observations of the patient in this simple test situation require the concept of Gestalt psychology. One interprets the activities of the patient, not as a special writing skill, but as the expression of the total personality. Under the conditions presented here, it becomes not an automatic writing act, but rather a volitional, deliberate type of activity requiring the "whole" attention and interest of the patient.

The authors have collaborated in the treatment of a considerable number of patients at Elgin State Hospital over the period of a year. A simple test situation was evolved which served as an occupational activity well within the capabilities of all the individuals. The 26 letters of the alphabet were utilized as representative of 26 discrete, volitional acts; namely, the acts of writing the respective letters. Those physical movements of the hand in guiding the chalk over the blackboard in forming the letters "A," "B," "C," etc., are simple and uniform acts for which the corresponding letters become the symbols. The very simplicity and uniformity of these acts make them an idea standard, safely within usual comprehension levels.

How accurately and well the patient forms the letters is of little moment; it is the manner of his response which is all important. This reaction of the patient affords specific diagnostic information to the therapist, and frequently indicates the psychotherapy to be administered. For example, it is not uncommon for the patient to indicate or openly express his annoyance at the extreme simplicity of the task confronting him. This is usually a good indication of the concealed feeling of inferiority or inadequacy which troubles

him. Or he may exhibit self-consciousness in varying degrees, from mild fright all the way to abject fear and panic, thus suggesting to the psychiatrist that his emotional instability may be based largely on a sense of insecurity. Similarly, the psychiatrist judges from manic and "smart Aleck" behaviorism. Or again, it is not unusual to encounter in the patient a sullen resistance to the situation, which indicates his negativism, sometimes in the form of depression, even with tears, as the patient fails to maintain his hostility.

All sorts and degrees of patients' reactions are observed, and the therapist, quick to observe and analyze these, is frequently afforded the opportunity to administer effective treatment on the spot. Often this can take the form of comments, made to the class and not to the patient, bearing on the nature of the patient's response, its probable causes and their solution or cure, bringing in always the parallel between the patient's reaction to the test situation and his reaction to the situations presented in life.

*Situation No.* 1. The patient is asked to write the alphabet on the blackboard at his own speed. Small script letters are insisted upon. Not infrequently, individuals will write capital letters, mixed small script and capital letters, or print. If the individual does not know the alphabet, the letters may be written by the psychiatrist and the patient asked to copy them. This is seldom necessary. This situation gives a sample of the patient's activities in manual performance. To some extent—at times to a considerable extent—it corresponds to the patient's spontaneous behavior. Rather frequently, the attitude and manner of the patient in an interview will differ very markedly from the attitude and manner evidenced in the performance of these manual movements.

*Situation No.* 2. The letters are dictated. The important dynamic aspect of this situation is that it is a controlled one. The time interval between the lettters can be varied at the discretion of the therapist. It became increasingly evident in the course of the work with a large number of patients that the prolongation of the interval often introduced in the patient a considerable degree of tension. The therapist, with experience, becomes increasingly adept at observing and modifying this tension through alteration of the length of the pause. If the interval between letters is pro-

longed, a frustration component develops in the patient. His natural impulse to go ahead and write the letter at his own pace is frustrated by the need to await the dictation.

*Situation No.* 3. The patient and the therapist alternate in writing the letters. In this situation, the problem is presented of two individuals engaged in the same task. One endeavors, as far as possible, to achieve a feeling of rapport through a common interest in the same job. The observer can, of course, determine when he will write his letter and to this extent can again introduce an interval which constitutes a frustration for the patient.

*Situation No.* 4. The therapist and the patient say the letters of the alphabet alternately. To a considerable extent, under these conditions, the activity approximates a nonverbal conversation.

*Situation No.* 5. The patient is asked to write the letters with his left hand. This represents an unfamiliar task and, to some extent, introduces an element of frustration.

*Situation No.* 6. The psychiatrist writes the letters and asks the patient to pay attention to the act of writing. One develops, with experience, considerable skill in estimating the amount of visual attentiveness which the patient evidences.

*Situation No.* 7. There is room for varied modifications. For example, the psychiatrist writes the letters as in Situation No. 6, but in the interval between the letters he comments upon the quality of attention shown by the patient. He may for example, point out that the patient's level of attentiveness is inadequate. The therapist may insist upon more concentrated and intense interest in the given activity. Not infrequently the patient will respond that anyone can write these letters, that there is nothing in the activity to merit any further interest. It becomes the problem of the therapist to attract his interest.

As an examination, this procedure has been used for a large number of patients. It is not pretended that this type of examination replaces the usual form of evaluation. However, if one examines patients routinely along these lines and interprets the deviations as they occur, one arrives at somewhat different conclusions from those conventionally reached. An order of facts is elicited which requires an interpretation suited to these facts. In the case histories to be presented there are several which illustrate some devia-

tions observed in this form of examination. It is apparent that all deviations cannot be discussed in one paper. Those discussed here are selected because they present fundamental problems, were undeniably present in the cases examined and had significance only as they were interpreted psychophysiologically.

The integration of psychophysiological functioning in a given volitional act such as is present in these test procedures involves not only the release of movement, but also the restraint of movement. A pause is present between each separate act of writing a letter. During this pause, one is prepared to write the letter. Restraint of the movement until one is "prepared" is essential to the successful execution of the task. If, during the dictation of the letters, the interval is prolonged, an impatience develops in the person performing. This impatience must be controlled. It may be expected that at the examination of patients some loss of control of this tension may be evidenced. This loss of restraint may be a primary pathological condition rather than a secondary symptom. From this standpoint, the illness of the patient may be related to the defect in integration of the restraint of movement and its release.

A parallelism exists between psychophysiological integration and the synergism present in antagonists as described by Sherrington. If flexion of the forearm on the arm takes place, there must be a release of the extensors; and, correspondingly, if extension of the forearm takes place, there must be a release of the flexors. If "I" wish to flex the forearm upon the arm slowly, I check the degree and speed of the flexion movement by my control of the extensors. The integration of movement psychophysiologically requires the control over both antagonists.

Another aspect of psychophysiological adjustment is the problem of attention to the given task to be performed. Attention or concentration upon a given task requires the exclusion of other stimuli which capture interest. For example, at this moment the footsteps of a passerby, the presence of another individual across the room, or the memory of some emotionally charged event which occurred last night all tend to divert attention from concentration upon the given task. The successful execution, therefore, of a simple sustained volitional act requires the restraint of random impulses

which arise. It may be expected that in a more severe disturbance of volitional control such random impulses will be released when the interval between the letters is prolonged.

Turning to the therapeutic aspects of the procedure, tabulation of the 73 patients who attended the group therapy class weekly for a one and one-half hour session during the course of one year has been subdivided according to the diagnoses and the degree of improvement noted at the end of the period:

| | Total patients in class | Paroled: Improved or recovered | Class patients still in institution—41 | |
|---|---|---|---|---|
| | | | Slightly improved | Markedly improved |
| Dementia præcox | 20 | 10 | 8 | 2 |
| Psychoneurosis | 22 | 6 | 11 | 5 |
| Involutional | 8 | 6 | 1 | 1 |
| Manic-depressive | 7 | 3 | 2 | 2 |
| Paranoid state | 4 | 1 | 2 | 1 |
| Psychopathic personality | 2 | 1 | .. | 1 |
| Arteriosclerosis | 1 | .. | 1 | .. |
| Epilepsy without psychosis | 1 | .. | 1 | .. |
| Not diagnosed | 8 | 5 | 3 | .. |
| Total | 73 | 32 | 29 | 12 |

| | |
|---|---|
| Patients in class at present | 30 |
| Patients left for treatment | 6 |
| Patients left—disturbed behavior | 2 |
| Patients left—lack of interest | 3 |
| | 41 |

It is true that a number of these patients might have improved or recovered spontaneously. It is equally true that a number of other therapeutic measures were employed, such as occupational, recreational and industrial therapies, which undoubtedly played their part in the treatment. The writers wish to emphasize that the regular administration of the group psychotherapeutic modality fitted in well with all of the other institutional measures.

It is recognized that the statistics give us a rather meager picture of the value of the therapy. A description of some characteristic problems met in the course of therapy will demonstrate more

clearly its dynamic aspects. Eight cases are illustrative. The first three demonstrate three types of disturbance of integration shown in the test situation.

*Case* 1. A. C., an 18-year-old young man, was admitted to Elgin State Hospital in January, 1939. He was an honor student in high school, made a good adjustment with his instructors and was rather popular. He showed normal interest in the opposite sex and had many friends. The onset of illness was gradual, with loss of interest in his senior year of school, worry over trifles, panic reactions and threats of suicide. He had periods of marked restlessness, bent his body back and forth, pounded the floor with his fists and had a staring facial expression.

At the hospital, he showed the typical catatonic posture, would remain fixed in one position, shoulders stooped, mouth open and drooling saliva, his forehead furrowed. He exhibited marked cerea flexibilitas, and it was necessary to tube-feed him. Under sodium amytal, there was considerable amelioration of these symptoms, and his muteness disappeared. He received metrazol and insulin with some improvement, short periods of relapse, and again improvement. Eventually, he became stabilized, with a residual of personality defects. He appeared excessively shy, immature, had difficulty expressing himself and presented some neurotic components. He would develop periods of weakness when he would suddenly sink to the floor. Periods of irritability were present, and he would suddenly attack some patient, thinking he was being imposed upon.

When asked to write the alphabet, he showed a remarkable phenomenon. A prodigious effort was made, the forehead was furrowed, the eyes were screwed up, the head moved about, the body was twisted, and the legs moved to and fro as if he were lifting an enormous weight rather than performing a very simple task. When the letters were dictated separately, the disturbance increased rather than diminished.

The presence of this disturbance of volitional movement could not have been suspected from observation of his activities in everyday life. Repeated examination demonstrated that it was a true disturbance and that the patient was unable to modify these reac-

tions without help. The following considerations are presented to give meaning to an otherwise meaningless set of observations.

It is suggested that the inability of the patient to perform a discrete volitional act without accompanying movements of a large mass of unrelated muscles represents a loss of the restraint of movement which accompanies training and education. He had become infantile in his psychomotor control. The infant at birth moves practically all parts of the bodily musculature in a massive, chaotic manner. Growth of his control over the parts of the body consists not so much in learning to move a certain part as in the inhibition of movements of all other parts of the body which tend to move when the movement of a certain part is contemplated. In other words, the release of a discrete part, as the hand in writing, involves the inhibition of all the rest of the body. A. C. had reverted to a type of functioning evidenced in a very early period of life. This defect of psychophysiological functioning parallels his personality defects, as evidenced in his dependence on others, his stammering, his shyness and seemingly childish manner. Under training, the greater part of this disturbance in this particular act disappeared. Simultaneously, a considerable improvement in his general adjustment also took place.

*Case* 2. E. H. was admitted to Elgin State Hospital, December 11, 1940, at the age of 33. She had been graduated from high school and business college, and was always on the honor roll. In 1929, she was released from a position which paid well and gave her some satisfaction. Thereafter, she seemed unable to hold positions for any considerable period. She had little contact with the opposite sex, although there was reason to believe that she had considerable interest in men but was unable to gratify this interest effectively. Her adjustment became increasingly poor; and she remained at home, with some periods of employment from which she was usually discharged. She developed "hysterical" symptoms and would scream and shake. She became increasingly irritable so that she could not be kept at home.

In the mental examination, she giggled inappropriately, seemed immature in her attitude, acted the part of a spoiled child, was rather demanding and expected that her requests would be immediately carried out. A marked restlessness was present. She grim-

aced, moved her head to and fro, readjusted her posture constantly and moved her hands in a manner which at times suggested choreiform movements.

When this patient was asked to write the letters, she did so rapidly and under considerable tension and pressure. When the letters were dictated to her and the time interval between the letters was prolonged, it was impossible for her to wait until a letter was dictated. Regularly, her hand was physically restrained; but invariably she did not wait for the dictation of the next letter. This inability to restrain the impulse to write the letter and wait for the dictation was so striking and shown so consistently that it must receive due weight as an important index of her pathologic mental functioning.

Persistent training in the restraint of her impatience during the interval eventually brought about increased control; but, over a period of months, the same difficulty in restraining herself during the interval was evident although less marked. Along with improvement in control of her impulses, a general improvement took place in her behavior and in her institutional adjustment.

She had previously refused to cooperate in any task in the institution, but she now returned to her work as a typist, received the freedom of the grounds, although she did continue to retain a paranoid attitude toward the fact of her illness, her relatives and the institution, and had a rather naïve, child-like outlook on life. She did, however, improve sufficiently to be paroled from the institution.

*Case* 3. M. H. was admitted to the Elgin State Hospital when 17 years old. She had developed normally until 13 years of age and then had become inattentive in her school work. She would sit and stare. She developed a number of bizarre ideas and became preoccupied with ideas of homicide and suicide. She presented a very dilapidated mental state. She was untidy in habits. She stared with mouth open, fingers in mouth, and displayed no interest in her surroundings, nor did she respond to verbal stimulation. She was not examined in the test situation at this time; but she received shock treatment and improved to some extent, was more responsive, although she continued to be a regressed hebephrenic patient. She giggled, made inappropriate childish remarks, as, "Give me some candy." The outstanding abnormality in the test situa-

tion was evidenced during dictation. She would write the letter dictated and then in the interval would smile, talk to some one in the "air," grimace, gesture, suddenly get up and reach for an object, etc. In other words, random impulses were expressed without restraint. The quality of her attention must also be questioned, as it would sometimes be necessary to repeat the dictation several times to obtain her execution of the act.

If one observes this case of hebephrenic dementia præcox in this simple test situation, one becomes increasingly impressed with the fact that she was unable to concentrate successfully. In spite of repeated commands, persuasive suggestion and encouragement, it seemed impossible for her to restrain the random movements and speech production. Training in concentration and repeated suggestion of control of these random movements eventually brought about considerable improvement in the patient with a lessening of the disturbance as evidenced in these test situations. Considerable improvement likewise took place in her general behavior. She appeared less childish, showed more poise and evidenced fewer random movements. In ward activities, she helped in simple tasks, and she did very good work in occupational therapy.

*Case* 4. E. J. was described as a bright student, was graduated from high school at 18, adjusted well with her classmates, but in the home was attached to her father, antagonistic toward her mother and jealous of her sister. She was married at 28 and got along well with her husband, but gradually showed a change in personality, with an increasing paranoid reaction against her mother. She developed similar paranoid trends against her best friends and then evidenced a strong dislike for her father. She has remained in this paranoid frame of mind for the past 10 years during which time she has been hospitalized at private sanatoria and at Elgin State Hospital.

This patient is rather an artistic individual, does needle-point of unusual and original design, shows some dramatic ability, sings and writes poetry. Her artistic temperament was likewise displayed in her frequent melodramatic attitudes and bids for attention. She would often toss her head, appear offended and refuse to speak. At other times, she would weep bitterly. She showed extreme antagonism toward all with whom she came in contact,

except for some one person toward whom she would for a time present the more mellow aspect of her personality. She was a constant "busybody," endeavoring to help all the patients on her ward as part of her lofty aspiration to "help humanity." A curious accompaniment to her desire to help was her propensity for appropriating other people's belongings. She was vivacious, witty, could be a good actress at times, so that for a short period she gave the impression of being a fairly normal individual. When seen on repeated occasions, however, the psychotic aspect of her personality was apparent.

In the therapeutic sessions, in Situation No. 1 where she wrote the letters without dictation, she demonstrated all the varying aspects of her personality as observed in her general behavior in the institution. She would at times write a letter in quite a normal manner. At other times, she would write in abnormally large or abnormally small script with an undue flourish or with a coarse, heavy pressure. She might at any time introduce variations, demonstrating the originality which she showed in her needle-point. She might print in an unusual manner, change the order of the letters, or arrange them in unusual patterns. To a considerable extent, she could be influenced, however, to conform to the confines of the group activity; and in the course of time the erratic, bizarre performances diminished. Her desire to "help humanity" was utilized in the group sessions where she was encouraged to help other members of the class. She repeatedly demonstrated the ability to curb her melodramatic outbursts in the interests of the patient with whom she was working. Now, to some extent, the improvement in her behavior in class has been reflected in her general behavior.

*Case* 5. A. B. was born with a hare-lip; and, although surgery improved the deformity, she was always sensitive about it. She was a good student, was considered a brilliant business woman and was employed as a credit manager for a number of years. She was married at the age of 23. Her husband had a good position and provided reasonably well for the family, but the patient's tastes were far beyond his income. They were sexually incompatible, since her desires far exceeded his. She continually struggled to assert herself. Following the birth of their second child, she joined

the parent-teachers' association and other similar organizations in an effort to escape the domestic routine. She quarreled with her husband because he had to work and could not take her out socially. She became much depressed when he lost his job, evidenced increasing sensitivity about her deformity and felt that her family no longer loved her. Shortly before her admission to Elgin State Hospital at the age of 38, four years after the first evidence of personality disturbance, she developed an apprehensive state with marked persecutory paranoid ideation.

This patient was a very fluent, glib talker. Her level of intelligence was obviously high, as measured by her I. Q. She held herself erect, was rather positive in her manner of speech and gave the impression of being a dogmatic, opinionated person. Frequently she was quite resentful in her attitude, although in the group she was surprisingly cooperative and at no time overtly evidenced her resentment or failed to adapt herself to the group situation. She had the freedom of the grounds, came to the group class on her own initiative, took notes on the discussions and developed considerable interest.

In the first situation, she wrote the letters with an excessive zeal and energy. This became one of the first problems for therapy. It was difficult to present to her the possibility of improving her performance by modifying her stereotyped approach. Likewise, she constantly rationalized the basis of her failure to adjust as due to circumstances—such as lack of money, difficult domestic situations and the like. It was hard for her to regard her poor approach to the solution of problems as one of the possible sources of her trouble. Her inability to modify her approach to the execution of the simple act in the group situation was quite comparable to her fixed attitudes in her maladjustment to life situations. When she was frustrated in the release of her customary excessive effort, she became noticeably depressed, and tears actually appeared in her eyes. The interplay between the confident aggressiveness and the depressive uncertainty was clearly demonstrated.

Eventually it became possible for her to lessen her effort without bringing with it the self-distrust and depression. Another problem which then presented itself was the frequent appearance of boredom. She rationalized this as related to the simplicity of the

task in which she was engaged. There is an interesting parallel between her attitude in the group situation and her dissatisfaction with the humdrum routine activities of her everyday life at home. A considerable part of her mental life was occupied with the desire for a bigger rôle, more exciting experiences and more expensive social settings. She had a considerable fund of imagination, but it was employed in a manner calculated to weaken her interest in the routine activities of life. In the course of the group contact, she was stimulated to employ her imagination to create a continued flow of interest in the simple tasks. She ultimately realized that the degree of interest in living depends more upon the attitude of the individual toward her task than on the glamour inherent in the task itself. This patient evidenced an increasing maturity in her outlook in the group session, the hospital and, later, in her home adjustment after her discharge as recovered. She has returned frequently for continued therapy in the group.

*Case* 6. E. M. was an illegitimate child, and that fact was known in the small town in which she was reared. She always felt that her mother dominated her, and she blamed the mother for her own development of an "inferiority complex." She was a competent stenographer, holding an army job in the Philippines for 12 years. She carried on a love affair with a married man over a considerable part of this time; and, after he left the Philippines, she became rather paranoid in her attitude, blamed other individuals for her inability to adjust satisfactorily and became addicted to amytal, bromides and alcohol. She had a previous hospitalization for alcoholism within the year before her admission to Elgin State Hospital when she was 36.

The patient was introduced to the group sessions several weeks after her admission to the hospital. She was a corpulent, redhaired, apparently phlegmatic individual with an enigmatic countenance which gave relatively little clue to her emotional undercurrents. In the test situations, it became evident that she felt tired much of the time. This was recognized as parallel to the inertia and lethargy evidenced in her bodily movements. It became evident in Situation No. 2, under dictation, that this inertia was only apparent. Under provocative stimulation, she bristled up, lost her appearance of lethargy and showed an attitude of interest

and attention. It was pointed out to her that the spirit with which she tackled a task was as important an objective as the successful completion of the task itself. Situation No. 7 afforded a valuable contact. When she was asked to watch the doctor write the letters, it was pointed out to her that her general demeanor, posture and facial expression were more important to the observer than a mere fixation of the eyes upon the act of writing. She became sensitive to that critical observation and braced up to meet it. This was recognized as similar to her life situation, where she had lost the quality of self-respect with a lowering of her life adjustment and a failure to adhere to her former social standards. She responded well to this type of therapy, regained her interest in her stenography, enjoyed the recreational facilities of the hospital, and after her parole from the institution, obtained a good position, married and at the present time is making a good social adjustment.

*Case* 7. M. W. was 38 at the time of her admission to Elgin State Hospital. She was a brilliant individual, had obtained her bachelor's degree from the University of Chicago, had been self-supporting the greater part of her life and was quite competent economically. She was described as emotionally unstable, an extremist in her points of view, but she displayed well-diversified interests. For a number of years, she had had homosexual attachments with a number of persons. A heterosexual experience in her 'teens which ended in an illegitimate pregnancy may have contributed to the accentuation later of the homosexual tendencies. About nine months before admission to Elgin State Hospital, she developed marked paranoid ideation, lost interest in all of her activities and shortly before admission developed bizarre delusional ideas involving mental telepathy, listening devices and poisoning by gas. She received a course of insulin therapy, improved considerably in her adjustment, but continued to entertain some of her bizarre ideation.

This patient in the class situation showed little deviation from the normal person, showed a good quality of interest which was well sustained. She was very cooperative—took notes for the classes, and was quite competent in the manner in which she handled her assignment. Yet, in spite of the fact that she was so normal in this setting, in personal interviews with the doctors she continued

to express paranoid ideas. She felt that the woman doctor, a personal friend whom she had consulted professionally, had "double crossed" her in having her committed.

An effort was made to make her less rigid in her rather unbending viewpoint toward the responsibility of others for her illness. It was repeatedly pointed out to her in the test situation that the opinion of others regarding her performance was more important than her own, that other individuals could more readily see her defects than she herself could. It was explained to her that this is common to all individuals in that it is easier to see another's shortcomings than it is to see one's own. Repeatedly, therefore, as she wrote a letter, she was made more aware of the fact that she had an audience and that the opinion of the audience regarding her performance was the prime consideration. A parallel was drawn between the audience in the class situation and society in the life situation. She responded well to this form of guidance, improved considerably, was a useful worker in the institution and, after she left, returned to her occupation as a research statistician. She was discharged from the institution as recovered, and at last reports she was adjusting very well.

*Case* 8. J. M. had a rather checkered career. She was a good student but was a disobedient, willful child who was rejected by her mother and had frequent tantrums. She planned to become a doctor and then entered a school for nursing but was expelled because of her use of narcotics. She had frequent homosexual affairs. She was constantly getting into one "jam" after another, was an inveterate liar, was melodramatic in her attitudes, and appeared to enjoy getting into a scrape. There was no subsequent remorse. In fact, she showed an adolescent braggadoccio after her escapades. One one occasion, she locked her mother and herself in a hotel room, threatened to beat her mother and throw herself out of the window if she did not receive a certain sum of money. At various times, she made insincere suicidal gestures with overdoses of sedatives.

She was admitted to Elgin State Hospital at 34 years of age and was diagnosed as a psychopathic personality with pathological emotionality.

She was an enthusiastic secretary for the group, her notes were well organized, she showed a good quality of insight into the project.

This individual was so intelligent, interested and anxious to learn that it was necessary to present to her numerous ideas rather than to follow one set pattern. For example, she was interested in the problem of timing and the pause as the essential background of all constructive thinking and planning. She enjoyed exercising her power of restraint, as evidenced in the prolongation of the pause, and was aware of the part it played in permitting a more complete self-expression in the given art. She became more sensitive to the mood fluctuations in even the simplest performance and commented upon her increased confidence as she gained more direct contact with her states of feeling while working along these ideas. The emphasis upon the audience as a dynamic factor in every performance attracted her interest. She was instinctively an actress, but had failed to employ her dramatic ability for her own advantage. She was able to see the parallel between the dramatic aspects of the class situation and the necessity to keep within the limits of conventional standards in her everyday life. Her adjustment in the institution increasingly approached the normal. She learned to enjoy the more conventional manner of living and carried it over into her life adjustment after leaving the hospital. At last reports she was getting along quite well and was self-sustaining.

## Comment

The writers have presented a simple series of test situations utilizing the letters of the alphabet as volitional acts with a dynamic interval of time separating them. Eight cases were presented, the first three of which demonstrate distinctive deviations in performance which will now be discussed.

Case 1 demonstrates a defect in psychophysiological functioning in which the reciprocal relation between the release of a discrete part and the inhibition of all the other parts of the body musculature was disturbed.

Case 2 demonstrates a defect in integration of the restraint of movement with its release.

Stuart W. Cook, in the May, 1939, issue of the American Journal of Psychiatry, lists six situations which result in neuroses in animals. His Situation 3 is of especial interest in this discussion. Six dissimilar, conditioned salivary reflexes were established in each dog experimented upon. As originally established, they were instantaneous reflexes. As the experiment proceeded, they were changed into delayed reflexes. A five-second increment in the interval between the initial stimulation and the food reward was gradually added. Two types of dogs were described; an excitable dog and a more phlegmatic type of dog. The phlegmatic type of dog reached a three-minute interval without exhibiting any signs of being disturbed. The excitable animal became generally aroused when the two-minute point was reached; and at the three-minute delay "he became crazy, unceasingly and violently moving all parts of his body, howling, barking and squealing."

It is suggested that there is a striking analogy between Case 2 in the test situation described here and the experimental neurosis in the dog after a three-minute delay in the presentation of the food reward. The "strain" in the animal to restrain movement following the initial stimulus proved too great and resulted in the loss of all restraint. In the patient in Case 2, there is likewise an inability to withstand the strain of withholding a movement or response over a given interval of time.

Case 3 is one of hebephrenic dementia præcox. When examined in these test situations, the deviations in performance are interpreted as defects in attention, concentration and a disturbance of the integration of attention to the given task as related to the exclusion of random stimuli and impulses toward movement.

It should be emphasized that the purpose here is to present another condition of examination. Our customary interpretations arise from the methods and conditions of examination. The nonverbal setup described in this paper leads to clinical descriptions and evaluations based upon the method of examination. This method of evaluation necessitates psychophysiological concepts of the type described by Hughlings Jackson, Adolf Meyer, writers of the Gestalt school of psychology and others. It offers a basis for therapy along the lines of conditioned reflexes as described by

Pavlov. It is not presented as a cure-all or as a replacement of the usual methods of examination, but does offer supplemental facts, at times of crucial diagnostic and therapeutic significance.

As to the procedure as group therapy, it is well recognized, and instances are to be noted in the preceding cases, that transference plays a very important rôle in all psychotherapy. Group psychotherapy presents the interesting phenomenon of transference to the group rather than to the person conducting the group. Although it is realized that attachment to the psychiatrist still plays an important part, it was the writers' persistent effort, as a dynamic factor in the performance, to condition the patient performing at the blackboard to the other members of the class. The substitution from the class to society at large is a much simpler transition than that from a person to the class.

The performer was continually made aware of the degree of interest evidenced by the rest of the class and repeatedly, as the interest of the class waned, this problem was aired and dealt with as a challenge to the entire group. As the writers became better acquainted with the individual personality makeups, it was possible to arrange more skillfully the group performances at the blackboard, pairing off energetic manics with apathetic depressed patients, or indifferent dementia præcox cases. Not infrequently, some patient serves as a source of stimulation more effective at the moment than the efforts of the therapist. Some patients have a personal empathy for particular members of the class and in this way are of distinct benefit.

One of the important factors which adds to the interest of those members of the class who are not performing is that all of those present receive the opportunity to perform. There is, therefore, an active interest of the participant, rather than the passive interest of the usual audience. Comments and observations from the audience are continually invited, although care is exercised to keep the discussion within reasonable bounds. The effort is continually made to weld the class into a functioning whole, make each person aware of the important part he plays in the makeup of the group and stimulate him to a competitive zeal in fostering the success of the total class effort.

The writers recognize the value of biographical data, but it should also be noted that data are not essential in this approach. What are dealt with primarily are the patients' present functioning and their future improvement rather than their past mistakes. However, supplementary interviews are held with patients as indicated, so that an elaboration of their personal problems may be included in the discussion. This is in contrast to the placing of emphasis by Dr. Louis Wender who employs psychoanalytic concepts in dealing with his groups. He states that an intimate knowledge of the patients' backgrounds and histories is essential to their inclusion in the group. With his method, group psychotherapy supplements the individual interviews.

The writers are heartily in sympathy with the statement of Dr. Ira Altschuler, who remarks that the group contacts are invaluable in diagnosis. As he states, there are unlimited opportunities to study the individual patient in his impromptu reactions to others and thus form a better idea of his condition and problem.

Dr. Schilder, in his book, "Psychotherapy," emphasized the fact that material often comes out in the group that does not appear in individual treatment. He added also that the resistance of strongly repressed patients may be decreased by having them participate in a group.

The orientation of the psychiatrist in dealing with the group along the lines described in this paper is primarily to the normal rather than to the abnormal aspects of mental activity. The major expression of that normality is the quality of interest displayed in any given task, situation or problem. This quality of interest is inseparable from the degree of concentration or attention which the individual can muster. The simple situations outlined represent occupational tasks which are well within the experience and capabilities of anyone.

The emphasis upon performance is important in that it permits a parallel to normal behavior. In other words, repeated emphasis is laid upon the fact that the same peculiar ideas, impulses and tendencies are present in the normal as in the abnormal. To the extent that they are not sufficiently controlled, they become pathological. It is explained that each letter represents any volitional

act. It may symbolize sweeping, cooking, sewing, repairing shoes, playing golf, carpentry, greeting another individual, driving an automobile, catching a street car or tackling a problem in calculus.

The emphasis upon restraint as a major factor of normal integrated performance is a very useful device, as was illustrated in Case 2.

Rhythmic performance is characteristic of all healthy physiological activities, as seen in the heart beat, the respiratory movements and the peristaltic waves of the digestive tract.

Similarly, in mental functioning, time is an essential background for reflection, planning, conceiving and preparing the ensuing task. During the interval between the letters, the performer is made aware of the fact that his own attitude toward the task and his own degree of concentration and interest determine to a large extent the success of his performance.

It is quite apparent that the major psychotic disturbances involving depression, anxiety, delusional ideas or confusional states include also, and perhaps primarily, a serious disturbance of the powers of attention, concentration and interest. The individual is unable to deal adequately with the immediate situation which confronts him.

Experience in group psychotherapy leads to the conclusion that we should not regard too seriously any set program or principles, or become too rigid in the presentation of the material, but should allow for considerable spontaneity and self-expression on the part of the participants. Certainly, a degree of humor should be introduced from time to time. In the course of the sessions, it may become apparent that everyone, including the psychotherapist himself, is becoming bored. It is possible to capitalize on such loss of interest of the group and present this as a problem to be dealt with by the individual in everyday living.

There is ample opportunity for varying the procedure. At times, three or four patients work together at the board. One member may be designated as the leader, and the others perform as he directs. It is interesting to note the change in performance, attitude and general behavior as the individual becomes in turn the leader or follower.

It is emphasized that concentration upon the present task at hand is of paramount importance in normal mental functioning and that the problem of everyday living is to maintain an adequate interest in the routine activities of daily life. Each individual endeavors to attain self-expression, and he must keep in mind a standard of excellence which will satisfy social convention, his fellowman and his employer.

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# PHYSIOLOGICAL FACTORS IN THE TREATMENT OF MENTAL DISORDERS*

BY THOMAS VERNER MOORE, O. S. B., M. D.

It was recognized by Freud that both mental and physical factors may give rise to abnormal emotional states. This fundamental principle caused him to differentiate between anxiety hysteria, a psychogenic condition, and anxiety neurosis which, according to him, is a toxic disorder arising from abnormalities of sexual indulgence. His clinical insight and experience made it impossible for him to group together under a single univocal diagnostic term the two extreme types of anxiety with which he came in contact.

There is much evidence at the present time to show that the Freudian distinction between purely psychogenic mental disorders and those which owe their origins to a somatic factor must be admitted, though the specific nature of the differential factor may be quite different from that conceived of by Freud.

There is an ever increasing body of experimental work which is rapidly accumulating evidence for the existence of mental disorders of physiological basis.[1] On the other hand, there is ample evidence for the psychological origin of many emotional disorders. And one might say that it is only reasonable to suppose that there will be many conditions in which the abnormal emotional manifestations are due to a combination of physiological and psychological factors in various proportions.

If this is so, it would be reasonable to expect that some kind of pharmacological treatment would at times be of aid in the management of emotional disorders. The fact that the emotions are intimately associated with endocrine activity would lead us to suppose that the pharmacologicals that might be of service are to be sought among those that affect endocrine function and perhaps in particular among those that have something to do with the activity of the adrenal glands.

*This study was made possible by a Rockefeller grant to the Catholic University of America. A preliminary report was read at the staff meeting of St. Elizabeths Hospital in February, 1941.

There is already considerable work which has been done in this line. Perhaps the classic study is that of Marañon[2] who found that some patients react to the injection of adrenalin with a purely somatic response, whereas others react with fear, anxiety and various emotional manifestations. Dynes and Tod[3] found that all their normal controls reacted with anxiety to adrenalin, but none of their schizophrenics did so, though the somatic response in each group was about the same.

Misch thinks that early conditions of anxiety may be treated by oral administration of choline, but if the condition lasts "it becomes built over in a psychoneurotic manner so that it may only be treated by a long-continued psychotherapy."[4]

It might be worth while mentioning here that a condition closely simulating the sham rage described by Cannon and Bard may be produced in cats by the intravenous injection of ergotoxin phosphate.[5]

Hoff[6] finds that 10 grams of ammonium chloride a day gives rise to a leucocytosis with neutrophilia and a rotation to the left. However, at the height of the acidosis, there may develop a marked depression. He cites with approval L. R. Müller, who found that the joy of living is dominated by the parasympathetic nervous system, whereas unpleasant moods are accompanied by an overstimulation of the sympathetic. He says that, in 1928, he showed that the depressed phases of infectious disorders are accompanied by an acidosis and happy moods on recovery with an alkalosis. In general: acidosis, leucocytosis, neutrophilia and a rotation to the left go with rise of fever and a sympathetic reaction; alkalosis, leucopenia, lymphocytosis, fall of fever with parasympathetic reactions.

On the other hand Laignel-Lavastine,[7] while recognizing that variations in the acid-base equilibrium are associated with fluctuations in emotional tone, says that anxiety is accompanied by an alkalosis with increase in the alkaline reserve.

Masserman[8] has recently expressed himself very strongly against conceiving of the hypothalamic centers as loci of emotional *experience*. If one looks upon these centers as tiny compartments in which emotional experience takes place and from which emotional

drives emanate, there is no evidence in the literature which justifies any such theory. But if one looks upon the hypothalamic centers as loci where stimulation may lead to emotional *expression,* the present experimental data give abundant evidence that this is *de facto* the case. If, furthermore, one looks upon the hypothalamic region as one of several places whose stimulation may under some conditions give rise to emotional *experience,* there is a great deal in the literature to indicate that this is true. Some of this evidence has already been presented.

### I. A RATIONAL BASIS FOR THE PHARMACOLOGICAL TREATMENT OF CERTAIN MENTAL CONDITIONS

A consideration of these facts suggested the possibility that a pharmacological which leads to a prolonged rise in the leucocyte count and a sympathetic reaction might be of value in one type of mental disorder, whereas an antagonistic drug might be of value in an opposite type of mental disorder.

Loehner[9] has found that adrenal cortical extract is of distinct value in a number of psychotic and psychoneurotic conditions, but he seems not to have attempted a differential treatment based on the type of mental disorder.

Furthermore, it has been found[10] that cortin causes a marked shift of the acid-base balance toward the alkaline side, that Vitamin C cannot exert this influence, but that it enhances the activity of cortin.

It is quite possible that the effects of fever therapy, metrazol, insulin and electric shock on mental disorders are due to the sympathetic and parasympathetic stimulation associated with these treatments. Some time ago, the author followed the leucocyte count before and after the injection of triple typhoid vaccine. The average curves from 100 such injections showed a fall of the total leucocyte count one hour after injection, followed by a prolonged rise. The polymorphs behaved in a similar manner, but the small lymphocytes in an opposite manner. A study of the blood sugar showed that it fell at first and rose later. Pulse and temperature behaved in a similar manner. With the rise in the polymorphs, the Arneth count was shifted to the left.[11] This was looked upon as indicating

a preliminary transitory parasympathetic stimulation followed by a prolonged sympathetic stimulation.

In metrazol injections, one obtains a similar leucocytic picture,[12] and Impastato and Almansi[13] quote sufficient studies from the literature to show that insulin, metrazol and electric shock produce similar metabolic changes with a marked rise of the leucocytes.

Frostig has pointed out[14] that subclinical pellagra sometimes presents the external symptoms of the agitated depressions and that these are relieved by the administration of Vitamin $B_1$ and nicotinic acid. It would therefore be reasonable to supplement adrenal cortex therapy with Vitamin $B_1$ and nicotinic acid.

At the December, 1941, meeting of the Society for Research in Nervous and Mental Diseases several studies were devoted to the relation of anxiety states to deficiency of Vitamin $B_1$.

The account of the literature thus suggests that it would be a reasonable treatment of certain types of depressed patients, those particularly in whom anxiety is associated with depression, to administer an extract of adrenal cortex and supplement it with vitamin medication.

Schizophrenic patients are in various ways at the opposite pole from the manic-depressive. There is a negative correlation between a number of schizophrenic and manic-depressive symptoms.[15] It is, therefore, possible that the antagonist of adrenal cortex extract might be of service in the treatment of schizophrenic patients. Adrenalin is ruled out because of its transitory activity. But it has been found that the anterior pituitary-like sex hormone found in pregnancy urine produces a prolonged rise in the leucocyte count.[16]

## II. TREATMENT OF PATIENTS WITH MANIC-DEPRESSIVE AND DEMENTIA PRÆCOX MENTAL DISORDERS

### a. *Patients Confined to a Mental Hospital*

On the basis of these considerations, it was determined to treat a series of patients presenting in general manic-depressive symptoms with an extract of adrenal cortex and a number of schizophrenic patients with anterior pituitary-like substance. The manic-depressive patients received one cubic centimeter of Eschatin three times a week, the schizophrenic patients 250 units of Follutein three

times a week. The initial dose of Follutein was usually 125 units.* After a course of 15 to 20 injections, a new series was started after an interval of a week to 10 days. Five or more series were given according to the circumstances.

Eschatin was supplemented by ascorbic acid, 100 mg. tablet, t. i. d., a. c., and thiamin hydrochloride, 3 mg. tablet, t. i. d., a. c. Follutein was supplemented by thiamin hydrochloride in the same dosage.

At times, there seemed to be no change in a patient's condition for several weeks, after which a slight improvement would initiate a change that progressed to recovery. A few tense, anxious, tearful patients, treated in the clinic while going to work every day, seemed to improve markedly from the very onset of the treatment.

The problem of a control series was solved in this way. Between 1926 and 1930, the author interviewed a number of patients with manic-depressive and dementia præcox conditions while making a study of the correlation of symptoms in the mental disorders. Many of these records were still available. So all were selected whose illness at the time of interview was two years or less in duration. These patients had received the usual good custodial care of the mental hospital, but no pharmacological treatment.

Table 1 gives the diagnoses of the untreated patients and, in parentheses, the number of years that elapsed between the time they were studied by the author and the year 1941, or their deaths or discharges. The figures are in years or fractions of a year. The average age of these patients was 43.11 years. The average duration of illness before the first interview by the author was 15.33 months. The range was from two months to two years. Most of the patients were seen at Mt. Hope Retreat, Baltimore, a few at St. Elizabeths Hospital, Washington.

All the patients treated with Follutein and Eschatin were at Mt. Hope Retreat, Baltimore, or visited the Child Center at the Catholic University of America, Washington. Some patients were treated,

*One schizophrenic patient received an initial dose of 250 units of Follutein and within half an hour entered into a state of catatonic excitement. However, he had been having these excited episodes, and it not clear that the Follutein was responsible for the one that followed its injection. This was the only untoward reaction in the writer's experience.

the duration of whose illness was much beyond two years. The introduction of such patients lowers the percentage of recovery due to the treatment. This bias against the favorable results of the treatment will help to counterbalance any obscure irrelevant factors that might be in its favor.

Table 2 gives the diagnoses of the treated patients, their ages, the durations of their illnesses before treatment and the results of treatment. The letter "M" indicates a man, "W" a woman. The letter "F" indicates that the patient was treated with Follutein; and the letter "E" that the patient was treated with Eschatin. Of the several patients treated whose illnesses lasted longer than two years, none recovered. This decreases the statistical probability of a cure by the treatment used; but it tends to prevent an exaggeration of the value of the treatment.

Table 3 gives similar data for patients coming to the mental clinic at the Catholic University.

TABLE 1. UNTREATED PATIENTS

| | Died after | Still in after | Discharged after |
|---|---|---|---|
| Dementia præcox (cases 19) | | | |
| Simplex | (13) | (14) (13) (14) | |
| Catatonic | | (14) (13) | (5) |
| Hebephrenic | | (13) (13) | (10) |
| Paranoid | (4) (15) | (13) (13) | (4) (1/3) (6) |
| Paranoid personality | (4) (5) | | |
| Manic-depressive (cases 25) | | | |
| Manic | | (13) (13) (14) | (2) (5/12) |
| Depressed | (13) (1 1/6) | (13) (13) (13) (13) | (8) (1/3)* (8) |
| Mixed | | (6) | (1/4) (4) |
| Involutional | (11) (12) (5) | (9) (6) (15) (10) | (1 7/12) |
| Undiagnosed (cases 4) | (7) | (13) (13) | (9) |

Ratio of manic-depressive to dementia præcox cases: $\frac{25}{19} = 1.32$

Ratio of manic-depressive to dementia præcox and other cases: $\frac{25}{23} = 1.09$

Percentage discharged in less than six months: $\frac{4}{48} = .083$

Total percentage discharged: $\frac{14}{48} = .292$

*Writer saw patient when about to be discharged.

TABLE 2. PATIENTS IN A MENTAL HOSPITAL TREATED WITH ESCHATIN OR FOLLUTEIN

| Type of illness | Number | Age | Duration of illness before treatment, months | Still in hospital | Discharged in less than six months |
|---|---|---|---|---|---|
| Dementia præcox (10 cases) | | | | | |
| Simplex | (W) I | 34 | 66 | F | |
| Catatonic | (W) II | 19 | 1 | F | |
| | (W) III | 37[a] | 3 | F | |
| | (W) IV | 27 | 5 | F | |
| Hebephrenic | (M) V | 24 | 72 | F | |
| Paranoid | (M) VI | 27 | 10 | | Fb |
| | (W) VII | 36 | 5 | | F |
| Not specified | (W) VIII | 32 | 29 | F | |
| | (M) IX | 30 | 7 | | F |
| | (W) X | 43 | 10 | | F and E |
| Manic-depressive (13 cases) | | | | | |
| Manic | (W) I | 27 | 2 | | E |
| | (M) II | 19 | 1¾ | | Ec |
| | (W) III | 37 | 12 | | E |
| | (W) IV | 46 | 2 | E | |
| Depressed | (W) V | 70 | 12 | | E |
| | (M) VI | 60 | 9 | | E |
| | (M) VII | 65 | 2½ | | E |
| | (W) VIII | 50 | 12 | | E |
| | (W) IX | 44 | 48 | E | |
| | (M) X | 50 to 60[d] | 7 | | E |
| | (M) XI | 50 to 60[d] | 9 | | E |
| | (M) XII | 50 to 60[d] | 9[e] | E | |
| | (M) XIII | 50 to 60[d] | 2¼ | E | |
| Psychoneuroses (1 case) | | | | | |
| Hypochondriases | (W) I | 26 | 1½ | | F |
| | Average | 37.65 | 14.08 | | |

Ratio of manic-depressive to dementia præcox patients: $\frac{13}{10} = 1.30$

Ratio of manic-depressive to dementia præcox patients and others: $\frac{13}{11} = 1.18$

Percentage discharged in less than six months: $\frac{14}{24} = .583$

a) Recovered nine months after onset of treatment

b) Had pneumonia and got well.

c) Returned to hospital for exhibitionism, but with no recurrence of the manic condition.

d) Approximate age; not included in making average.

e) Present condition an exacerbation of a chronic depression.

Perhaps the simplest way to find out whether the excess of discharges in the treated cases differs significantly from chance is to compare the difference in the percentages with the standard error of the difference between two percentages.

The formula for this standard error of a difference between two percentages is:[17]

$$\text{Standard error of difference} = \sqrt{\frac{p_x q_x}{N_x} + \frac{p_y q_y}{N_y}}$$

$p_x$ = percentage recovered, *untreated* cases.

$q_x = 1 - p_x$

$p_y$ = percentage recovered, *treated* cases.

$q_y = 1 - p_y$

$N_x$ = number of untreated cases.

$N_y$ = number of treated cases.

$$\text{Standard error of difference} = \sqrt{\frac{(.083)\ (.917)}{48} + \frac{(.583)\ (.417)}{24}} = .1082$$

The difference between the two percentages is .500 which is 4.62 times its standard deviation.* The earlier series of patients had merely good custodial care and more or less personal encouragement. The later series of patients had what the earlier series had plus treatment with Eschatin or Follutein. It seems reasonable to conclude that the excess of early discharges is due in some manner to the treatment.

*Some readers may not be familiar with the technique of testing the significance of a difference in an experimental and control series by the ratio of the difference between two measures (means, percentages, etc.) to the standard error of this difference. The problem is discussed in most books on statistical theory. When the ratio is 1.73 the chances are 23 to 1 that one measure is superior to the other. Peters and Voorhis (Statistical Procedures, p. 477) suggest 1.73 as a lower limit of fiduciality because from that point on an increase in the ratio leads to a very rapid rise in the chances of superiority. When the ratio is 2.00, the chances are 43 to 1; and when it is 3.00, 740 to 1. The ratio 4.62, given in the text would mean odds of about a half million to 1. This merely means that something other than chance must be invoked to explain the difference between the treated and untreated series. It does not, of course, prove that the difference was due solely to the treatment.

If one separates the dementia præcox and manic-depressive groups, it is found that only four in 10 of the treated dementia præcox patients were discharged within six months, but that nine of 13 or .692 of the manic-depressives were discharged in this period. There is, therefore, some weak evidence to show that the treatment of the dementia præcox patients was beneficial but rather strong evidence that the conditions of the manic-depressives were distinctly ameliorated. So far, none of these patients has relapsed and returned to the hospital; but only a few months to a year have now passed since their discharges.

The writer is aware that his solution for the problem of the control series is not entirely satisfactory. A thoroughly adequate control series should be equated for the ages of the patients, their environments, the types of their illnesses, intensity and duration of illness, etc. With the limited number of patients at disposal, the selection of such a group was not possible.

Another type of solution would be to compare the percentage of cures in the series with general hospital experience. Thus $\frac{14}{24} = 58.3$ per cent of the writer's dementia præcox and manic-depressive patients were discharged in less than six months from the beginning of treatment.

No patient was discharged in this series unless capable of carrying on independently in his former environment. This criterion has been considered as roughly the same as the "recovered" plus the "much improved" categories in the annual reports of the New York State Department of Mental Hygiene.

From the reports, are cited the percentages of manic-depressive and dementia præcox patients recovered and very much improved in the course of each year from 1930-31 to 1940-41. The percentages given here have been obtained by combining data from two tables in each issue.

| Year | 30-31 | 31-32 | 32-33 | 33-34 | 34-35 | 35-36 | 36-37 | 37-38 | 38-39 | 39-40 |
|---|---|---|---|---|---|---|---|---|---|---|
| Percentage | 34.5 | 29.7 | 29.6 | 32.9 | 36.3 | 35.3 | 34.4 | 39.7 | 39.6 | 41.3 |

The table gives, by the way, an interesting sudden rise in patients recovered and very much improved, starting about 1937-38. This may well be due to the introduction of "shock" therapy. A digression on this point may be worth while. According to Dr. John E. Ross,[18] Dr. Manfred Sakel was invited to instruct a group of physicians from various hospitals for mental disease in New York State and commenced his work December 8, 1936. One notices that in 1937-38 there was a sharp rise in the New York rate of recovered and much improved. Calculating from the data given in the New York reports, the percentages of recovered and much improved in the two periods in which the table is divided, one finds a difference in the ratio of these classifications of .072. Owing to the large number of cases treated, the standard error of this difference is only .0042, so that it is clear that something happened in the later period to increase the percentage of recoveries and marked improvements.

Let us return now to the problem of the present paper, taking the first period of the New York figures as a standard with which to compare the percentage of discharges in the cases treated at Mt. Hope. There is a difference in the rate of Mt. Hope discharges and New York recovered and much improved patients of .253. The standard error of this difference by the formula cited is .1007; and the critical ratio is 2.52, which as a chance event would happen six in 1,000 times. But the New York statistics were based on recovery or great improvement in the course of a year and the writer's on discharge in less than six months; so that the writer's rates of discharge are scarcely to be considered as a mere chance event.

### b. *Ambulatory Patients*

The patients just studied were confined to a mental hospital. A number of other patients were treated who came to the Child Center at the Catholic University of America, where adults as well as children are patients. Table 3 gives the results of treatment in the group of ambulatory patients.

Definite improvement in these cases has no such objective determination as "discharge" from a mental hospital. It means here the ability to return to work or a marked change from, e. g., a moaning tearful patient to a cheerful, happy smiling individual, or at least the termination of a tense, anxious condition so that the patient was able to continue work, whereas before it seemed almost necessary to resign a position.

The percentages improved are somewhat higher than in the hospitalized patients, as might be expected for various reasons.

If one adds together the figures in the two tables and compares them with the earlier hospitalized series, the evidence of significant excess of discharge and definite improvements is given by the following values:

$$\text{Standard error of difference} = \sqrt{\frac{(.083)\ (.917)}{48} + \frac{(.638)\ (.362)}{47}} = .0806$$

The difference between the ratio cured in total treated and untreated cases equals: (.638—.083)=.555.

$$\frac{\text{Difference in ratio}}{\text{Standard error of difference}} = 6.89$$

The difference cannot be reasonably attributed to a chance variation.

In this preliminary work, no attempt has been made to discover the most favorable size and frequency of dosage; nor have the comparative effects of various allied preparations been investigated. It was thought that the first step was to determine statistically, if possible, the fact of improvement or no improvement in manic-depressive and dementia præcox patients following the injection of Eschatin or Follutein. That improvement does occur, for some reason or other, has been demonstrated. The best preparation to use in a given type of psychosis and the most favorable size and frequency of dosage remain to be determined.

TABLE 3. RESULTS OF TREATMENT OF AMBULATORY PATIENTS COMING TO THE CHILD CENTER OF THE CATHOLIC UNIVERSITY

| Type of illness | Number | Age | Duration of illness before treatment, months | No definite improvement | Definite improvement in less than six months |
|---|---|---|---|---|---|
| Dementia præcox | | | | | |
| Catatonic | I | 21 | 6 | | F |
| Paranoid | II | 35 | 24 | | F |
| | III | 24 | 3 | | F |
| | IV | 27 | 2 | F | |
| | V | 25 | 12 | F | |
| | VI | 34 | 72 | | F |
| Not specified | VII | 20 | 1 | | F |
| | VIII[a] | 45 | 60 | F | |
| | IX | 45 | Indef. | | E |
| Manic-depressive | | | | | |
| Depressed | I | 42 | 120 | E | |
| | II | 39 | 60 | | E |
| | III | 45 | 120 | E and F | |
| | IV | | | | F |
| | V | 28 | 4 | | E |
| | VI | 40 | 5 | | Eb |
| | VII | 28 | 3 | | E |
| | VIII | 19 | 36 | E | |
| | IX | 27 | 24 | | E |
| | X | 26 | 2 | E | |
| | XI | 45 | Indef. | | E |
| | XII | 32 | 6 | | E |
| Mixed | XIII | 46 | 10 | | F and E |
| Involutional | XIV | 58 | 12 | | E |
| Undiagnosed | XV | 29 | 12 | E | |
| Psychoneurosis anxiety | XVI | 25 | 30 | | F |
| Average | | 35.00 | 28.36 | | |

Ratio of manic-depressive to dementia præcox cases: $\frac{13}{8} = 1.63$

Ratio of manic-depressive to dementia præcox and other cases: $\frac{13}{10} = 1.30$

## Summary

Starting with the heuristic hypothesis that there are in the hypothalamic region antagonistic centers that in some manner affect emotional experience as well as emotional expression, an attempt was made in this study to develop a pharmacological treatment of manic-depressive and dementia præcox disorders on a rational basis. Evidence from the literature is presented which suggests that adrenalin leads to anxiety reactions and motor activity in certain borderline mental conditions and that fever therapy, metrazol and electric shock therapy are followed by a sympathetic stimulation. It has been found that the injection of anterior-pituitary-like substance (Follutein) is followed by a prolonged sympathetic stimulation; and this substance was selected for the study of its effect on schizophrenic patients. Since the symptoms of the dementia præcox disorders are negatively correlated with those of the manic-depressive, it was decided to try the effects of adrenal cortex extract (the natural antagonist of adrenalin) on manic-depressive conditions.

The efficiency of the treatment was tested by the comparison of a treated series of hospital patients (24 cases) with an older series (48 cases) of untreated hospital patients. The critical ratio of the difference in the percentage of recoveries in the two series was 4.62, which leads one to believe that for some reason other than chance the treated series had a much more definite trend to recovery. Of the untreated patients, 8.3 per cent; of the treated, 58.3 per cent, were discharged from the hospital in less than six months. Besides the hospital cases 23 ambulant patients were treated, with 69.6 per cent of apparent recoveries.

It is suggested that this type of therapy merits further trial.


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Percentage definitely improved in less than six months: $\frac{16}{23} = .696$[c]

Percentage of dementia præcox conditions improved: $\frac{5}{8} = .625$

Percentage of manic-depressive conditions improved: $\frac{10}{13} = .769$

a) Temporary relief of anger produced by idea of reference.

b) Treatment supplemented at end by thyroid treatment, leading to rapid amelioration.

c) This does not include a psychoneurosis anxiety and an undiagnosed case.

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# THE ADLERIAN APPROACH TO A CASE OF IDIOPATHIC EPILEPSY

BY RALPH ROSENBERG, M. D.

There are almost as many theories of the etiology of idiopathic epilepsy as there are psychiatrists. In the Kraepelinian era, vague theories of constitutional, metabolic or toxic origin were the fashion. Later, with the rise of dynamic concepts came new theories. Bruche, in 1908, noted definite trends in hallucinatory aura. By 1911, Wilhelm Stekel had done psychoanalysis on three epileptics, and had obtained excellent results. In 1915, Clark, working in New York, observed that many petit mal attacks served a psychological purpose. This was quite a step forward, since most previous observers felt that petit mal attacks were more or less random results of "constitutional inadequacy" or some such unproven hypothesis. Clark eventually traced the seizures of epileptics to womb fantasies. Historically, the early years of this century were transitional. The schools of organic psychiatry were fading, while the schools of dynamic psychiatry were growing by leaps and bounds. Thus it was that Clark, clearly noting dynamic factors in epileptic phenomena, could not free himself from his organic background. He concluded that psychological factors operated in epilepsy, but that, somehow, the etiology must be constitutional.

By 1923, the transition from organic to dynamic was complete. Stekel had analyzed 16 epileptics, had cured 12 and had improved three. Stekel's approach may be termed Neo-Freudian. Generally adhering to Freudian concepts, he has not hesitated to add his own.

There are, of course, many dynamic schools. The following case study of idiopathic epilepsy has been approached via Adlerian or inferiority concepts. Fortunately, an unusually accurate anamnesis was available, since a staff physician had been the patient's classmate during the four preconvulsive years.

The patient was born in 1913, the youngest of three siblings. His birth and early development were normal. At the age of six, he entered school. At the age of eight, his schooling was interrupted by an attack of nephritis, which was ushered in by a convulsion. After a short period of convalescence, the patient appeared to be

strong, and continued to grow normally. A few months later, the parents noted a change in his personality. The patient became seclusive, irritable and jealous.

In childhood, nephritis beginning with a convulsion is not uncommon. However, permanent personality change is uncommon. The triad of seclusiveness, irritability and jealousy is almost diagnostic of a schizoid personality. The change in personality from normal to schizoid during the patient's eighth year indicates that some psychological catastrophe must have occurred during this period of his life.

In order to find this psychological catastrophe, it was necessary to obtain some of the patients guided associations* of this period.

The following is a report of the questions, answers and interpretations.

Q. Describe your childhood.

A. Happy because I was having a sociable time with people I knew.

The above vague answer assumes significance in the light of the next association.

*The method of guided associations consists in asking vague leading questions. Experience has shown that these questions are likely to lead to the fantasy life fairly quickly. The method lies half-way between Freud's method of free association in which the patient is told to say whatever comes to mind, and Jung's method of forcing one-word associations to one-word stimuli.

*Leading Questions for Beginning Adlerian Analysis*

Earliest memory?
Describe your childhood, adolescence, etc.
Describe your mother, father, sisters and brothers, etc.
Happiest period of life? Why?
Unhappiest period of life? Why?
What has been missing in your life?
What is your ambition?
What would you do if you had a million dollars?
What do you think of yourself? Successful? Handsome or pretty?
What would you do if you had your life to live over?
What are some of the things you are good at?
Has your life been happy or unhappy?
What happened to you just before you got sick?

Q. Describe your earliest memory.

A. I was three years old in Wyoming. I was the only one of the children who learned to milk a cow. I trained a heifer to shake hands like a dog. I remember the teacher at school having me give a lecture to the class on the training of animals. Mother was always proud of me for it.

The mental set of "having a sociable time and being happy" during childhood resolves itself into: (1) surpassing the other siblings in being the only one to learn to milk a cow; (2) being the center of attention at school (i. e., lecturing there about animals); and (3) winning the praise and attention of the mother. These three trends constitute segments of the personality goal and are merely three methods by which this patient tried to achieve a feeling of superiority. This he succeeded in doing until his eighth year, when a younger brother was born. This psychological catastrophe deprived the little household king of his privileged position of being the youngest and most petted child and of monopolizing the mother's attention. The emotional impact of the birth of the rival sibling may be judged from the following response.

Q. Describe your younger brother.

A. (Block for several minutes. Patient unable to reply. Question repeated in three minutes.) Patient snapped, "I can't describe him." Repeated demands for a description of the younger brother finally brought the response, "He was the pet, but he didn't get as much attention as I got before he was born."

We now have the explanation for the appearance of the triad of seclusiveness, irritability and jealousy at the age of eight. Each of these three qualities is pathognomonic of the feeling of inferiority: seclusiveness developed as a retreat from environmental frustration; irritability created by inability to cope with the new rival; jealousy caused by the sibling who now occupied the mother's attention.

Between the ages of eight to 10, the patient made the usual attempts to regain the center of attention, and to dwarf the attentions given the now favored rival. This information came from the following guided associations.

Q. What sort of man was your father?

A. Irritable at anything different from what he wanted. He wasn't very conversational. He had more interest in my younger brother than us. Mother said I was jealous of my younger brother when I was eight or 10. I was fond of sitting in neighbors' laps when they came to visit, and I was always the baby, even in the other families. Mother and I used to sing, and I selected my own harmony to contrast with her voice. Mother gave me a ukulele and instruction book when I was 10. I was very successful at playing it.

The patient's original interest in music evidently arose as an attempt to win back his favored position by so engaging his mother's attention. The patient's habit of sitting in adults' laps is a common device children use for gaining the limelight and consequent feeling of self-importance. The fact that the patient sat in neighbors' laps strongly suggests that he tried to sit in his parents' laps, and had been rejected with a consequent feeling of frustration. It is highly significant that the question, "What sort of a man was your father?" brought forth three criticisms of the father and the pleasant mental set of the mother, in which mother and child spent hours singing together. In other words, the father failed to pay special attention to the patient, was irritable toward him, and consequently gave him a feeling of inferiority. The patient therefore had little affection for his father. The mother gave the patient continued special attention, and caused him to like both the mother and music. Frequently, in other cases, the parental situation is reversed, the father flattering the child by his attentions and the child responding to the ego support by attraction to the father; the mother criticizing the child, thereby giving it a feeling of inferiority, and so gaining the child's hatred. This view, that the child's affections are a response to flattery and ego support, directly contradicts the Freudian Oedipus theory that child-parent relationships are determined by instinctive sexual urges.

In the case under discussion, the mother's doting on her youngest child until he was eight gave him a vastly exaggerated idea of his own importance. Small wonder that the child became egocentric, self-satisfied, egotistical, and that he developed a typical epileptic personality.

To summarize the period up to the age of eight, one may say that the mother's doting taught the child that he was to be preferred to others, and that he was the center of attention. After the birth of the rival sibling, the patient attempted to reattract the mother's attention by his musical skill. At the age of 10, the patient's personality was complete. His personality goal (i. e., the methods with which he chose to ward off the feeling of inferiority) consisted of: (1) the desire to be preferred to others; (2) the desire to be the center of attention, especially to gain the mother's attention; (3) the desire to excel in music. We shall see that all of the patient's later life was an attempt to achieve this personality goal, that he failed, and that he fled into his psychosis to create an imaginary world in which he was supreme.

Much of the period from the ages of 11 to 18 was blocked, the patient having repressed his ego defeats. However, the staff physician who had been his classmate during this period was able to fill in most of the gaps from his own observations. His description is as follows:

*Age* 16 *in* 1929

"The patient was taller, and looked and was actually two and one-half years older than the other students in his class. He seemed self-conscious and bored with classroom proceedings, and he argued with his teachers to prove that his own ideas were superior. He continually found fault with everything anyone said or did. He was egocentric and self-satisfied, and went about with an air of self-importance and intellectual superiority. He spoke in a pompous manner, using long words whether or not they were correctly applied. In the classroom he was preoccupied and inattentive. His movements were slow and awkward. He walked with head high, and seemed always to have his eyebrows arched superciliously. He seemed to walk on the cloud of his egocentricity; and had a compulsion, touching trees and posts as he walked along."

*Age* 17 *in* 1930

"He began to write poetry—much of which was considered good enough to be published in the school paper. He was gifted in this sense, and he knew it. He was a member of the high school band and orchestra, playing the French horn. It was almost impossible

to get along with him during music practice. He insisted that his interpretation of the music was the correct one, and many times refused to follow the director. He continually tried to impress everyone with his superior knowledge of music. He then turned to writing music, and it was of good quality. He wrote the words and music of what is now one of the school songs. He also wrote a popular song, which was accepted by publishers, and from which he received royalties during its short-lived popularity. He wrote several other pieces of music, each of which was rejected. He never had a 'girl friend,' and never associated with girls."

*Age* 18 *in* 1931

"During this year a great and noticeable change took place in the personality of the patient. He experienced defeat in music. In the class ahead, there was a boy who had an unusually good voice, and, who, incidentally, is now a featured singer in one of the popular musical comedies. The patient became quite jealous of this classmate, and a rivalry situation developed in which the patient's rival sang solos in the auditorium. The patient failed to achieve this distinction. He began to feel that he, too, was a good singer, and tried hard to impress this idea upon the music teacher. He seemed to resent the fact that someone else was in the limelight. The teacher tried very patiently to help him with his voice, but to no avail; and he then attempted to discourage the patient's growing enthusiasm. However, the patient would not accept this discouragement. He began to write more music and poetry to regain his short-lived popularity. These attempts at distinction failed because his music was poor and his poetry too superficial to merit publication in the school paper. He became irritable and more autistic and egocentric. He began to dress decoratively, wearing his hair long and flowing. He made abortive attempts to impress others with his various 'gifts,' stopping people on the street to recite his poetry. Finally, people became annoyed with this display, and dismissed him, in many cases most untactfully. His mannerisms became more dramatic. He began to lose friends, and he tried to break into cliques to make new friends—even trying to impress the Southampton summer society by posing as a member of its set. He became overproductive, and ended his speeches with 'Isn't that sen-

sible?' He talked with a perpetual silly grin and became more and more easily offended, almost to the point of becoming lacrimose at insufficient provocation. He became depressed, as in sharp contrast to his previous elation. He continued to act manneristically, walking about in self-absorption with peculiar facial expressions, decorative dress and pointless speech. Small children began to make fun of him in school and on the streets. This irritated him considerably. The major convulsive seizures started shortly thereafter."

Thus, in the immediate preconvulsive period several segments of the personality goal were defeated: (1) the desire to be preferred to others and to be the center of attention; (2) the desire to achieve superiority in music. The patient began to have seizures. His mother stated that the first convulsion occurred during a football game. When the patient was questioned during a clear period as to the circumstances preceding the first seizure (1931), he replied, "I was going to choir practice; it was called off, and that disappointed me so I had a convulsion." This was retrospective falsification, yet the fantasy showed how important music was to the patient's ego structure. Conveniently, the patient soon had a few convulsions, and during the postconvulsive confusion was disoriented, confused, rambling, incoherent, and, in general, completely dominated by his unconscious urges. The question was repeated during the dazed state. He replied, "Father and mother with me. I was kicking the ball, and we began to lose. I didn't want to jump overboard from shimmering." The patient began to shiver just as he does before seizures. It is interesting that this patient's assaultiveness is conspicuous because of his habit of kicking other patients, and this first convulsion occurred while the patient was kicking a football. Interesting, too, is the occurrence of the first convulsion following the ego defeat of losing at football. Again, the association of "We began to lose . . . I didn't want to jump overboard" makes one suspect that to this patient a convulsion symbolizes suicide by drowning. Suicide is, of course, a classical response to ego defeat. It is best exemplified in the Japanese custom of hara-kiri following loss of face.

The patient soon had so many convulsions that he was taken out of school. On July 12, 1934, he was sent away from his home to a

boarding house. Two days later, the patient had a full-blown grandiose system. He believed he was the second Christ, and that he had been selected by God to save the world by broadcasting his songs and music. One wonders why being sent away from home acted as a precipitating factor in the formation of a grandiose system. A segment of the patient's personality goal was to engage the mother's attention. The patient probably interpreted his being sent away from home as loss of the mother's favor. The patient was committed to Central Islip State Hospital on July 20, 1934. While there, he developed the idea that he was selected by God to cure the other patients by playing the piano for them in a "psychological manner."

The patient's grandiose system has two elements: (1) that he was selected by God and, therefore, is a very superior person; and (2) that his music is wonderful. Both elements are pathological fantasy achievements of segments of the personality goal laid down at the age of 10, and which had been defeated by reality. On July 22, 1934, it was noted that when the patient played the piano he seemed to direct all of his energy to the task. When finished, he turned about and looked intently at the patients who were listening to him. This seemed to make him happy. The reason for the patient's happiness is evident, since in this situation he achieved his goal segment of being the center of attention, even though the audience consisted only of fellow lunatics. When questioned about his spells at this period, the patient said he might be under somebody's influence, but would not elaborate.

On October 23, 1934, the patient was paroled to the custody of his father. At the first parole interview, the father stated that action would have to be taken on the patient's spells, since the other children were not safe during or after them. The form of such seizures, of course, shows sibling rivalry. During a seizure, the patient tore out the toilet bowl and bath tub at home. Often, the aura of a shivering sensation did not come soon enough to allow the patient to protect himself, and injury resulted. The patient stated that these attacks came when he was disappointed or thwarted. The father stated that the patient used the spells to terrorize the entire household, and that the other children had to accede to the patient's wishes. It is interesting that the members of the family

realized that the seizures were merely pathological ego supports, i. e., pathological means of dominating the environment and procuring a sense of importance.

Readmission was suggested. The patient was apathetic and indifferent to the entire situation. He recalled playing for the patients while at Central Islip State Hospital, and said he enjoyed it immensely since so many of the patients came to him later and told him of the inspiration afforded by his music. At this time, the patient developed an antipathy toward a niece, and it was felt that he might harm her.

The mother stated, "He has a very exalted estimate of himself. What is done for him he takes for granted, feeling it is done because people look up to him, and feel that he is superior." This illustrates the well-known Adlerian paradox that people who act in very superior fashion really feel inferior.

During the parole period, while the patient was walking past a very exclusive club in Southampton, the proprietor mistook him for a guest who was expected. The proprietor took him for a tour through the club, and then inquired for his name. The patient told him he was D. G.'s son, and he was feeling much better since he had spent the previous summer at Central Islip State Hospital. Upon the patient's return home, he told his father of the honor that had been conferred upon him. Subsequent to this incident, he would run to the club during seizures, would burst in upon the guests, and would refuse to leave. Once he stated that he had come because one of the guests had promised to accompany him on the piano. It is evident that this type of seizure and postconvulsive confusion served a definite psychological purpose to the patient in that he achieved his goal segment "of having a sociable time" and of becoming the center of attention through his music. These successful achievements of goal segments, alas, only occurred in the patient's fantasy life.

The mother felt that there was something uncanny in the way in which he responded to affection, so she refrained from giving him any. If she put her arms about him, he became very dramatic, tears came to his eyes and he said, "Oh, mother, you do not know how much this means to me." His hands then became clammy, and he seemed deeply shaken. The reason for the tremendous amount

of affect in this situation becomes evident when the part played by the mother in the personality goal is considered. Later, the patient stated he would do physical harm to his mother, whom he had often threatened by saying he would kill her if she sent him away to the hospital again. The great affect attached to the notion of being sent away by his mother is derived from the direct defeat of the personality goal segment which demands the mother's special attention. Such defeats produce strong feelings of inferiority, which, in turn, often lead to assaultive behavior. The homologue in "normal" behavior is the mother who strikes the child who refuses to submit to her will, thereby making the mother feel helpless and inferior. Assaultiveness is a pathological method of subduing the person causing the inferiority feelings.

On May 16, 1935, a social worker called at the home and interviewed the patient's mother. The mother said that two days previous to the visit, the patient had had another spell, this time publicly. After church services were over, the patient came out in front of the church, and started to tear off his clothes. It was necessary for a policeman to escort him home. The motivation of this epileptic equivalent is evident. It was merely another pathological attempt to gain attention.

In November, 1938, the man's diagnosis was changed from epileptic clouded states to epileptic deterioration because the patient showed increased difficulty in thinking, inability to calculate according to his former ability, impairment of memory and emotional slumping. The patient soon recovered from his so-called "deterioration," only to sink into another such period and again recover in repeated cycles. It is probable that these episodes represent periods of emotional blocking such as one sees in catatonics.

### Present Period

During his preconvulsive state, the patient is extremely quarrelsome. He pushes other patients about and insists upon being first in any line being formed to conduct patients to meals, amusements, etc. If any patient has a small privilege, he demands the same or a greater privilege. He becomes easily offended. These are all classical inferiority reactions.

The aura varies. Most often the patient shivers for a few seconds. Sometimes the aura consists of a solo dancing episode in which the patient goes to the center of the room, and dances foolishly by himself before the other patients. Again, the ego motive behind this aura is a primitive attempt to gain the center of attention and become an object of admiration. Children use the same method of bolstering their egos. They say quite frankly, "Mother, look at me, see what I'm doing, pay attention to me." If the maneuver is successful, it results in a feeling of self-importance. Often, the patient has no aura before seizures.

The seizures are of the standard tonic-clonic type. They require no comment except that the patient often bruises and cuts himself when he collides with the floor or furniture. This contradicts the older view that psychogenically motivated seizures do not result in bodily injury.

In the postconvulsive confusion, the patient is dazed and runs about apparently without purpose. However, during this state, the patient almost invariably tries to open all the doors he can reach. When asked for the reason, he stated, "Mother doesn't know where I am; I must find her and tell her I am here." The psychogenic motivation of the "confusion" is now plain. The patient's unconscious is unable to accept the ego defeat of the mother's desertion. In the confused period, he fulfills the wish that the mother accepts him and flatters him with attention in accordance with the personality goal segment laid down before the age of eight. The postconvulsive confusion lasts a few hours and gradually shades into a postconvulsive state.

The postconvulsive state lasts about 10 days. It is characterized by silliness, confusion, meanness and vicious assaultiveness consisting of kicking other patients and attempting to gouge out their eyes. This reaction once arose merely because another patient happened to arrive first at a wash basin.

During the interparoxysmal state, the patient will not take orders (for this would acknowledge the superior authority of the attendants), and must be coaxed to follow ward routine. He spends much of his spare time before a mirror preening himself. He is often decorative in dress. On many occasions, he has made large, floridly-colored artificial flowers for his lapel. The prize pathologi-

cal prop for his vanity, however, was an enormous bow tie made of gaudily-flowered curtain material pasted on cardboard, and hung around his neck with an old shoe lace. This arrangement would have done credit to a badly deteriorated dementia præcox case. The patient is extremely domineering, seems to (but actually does not) feel he is much better than other patients. He is often noted as laughing inappropriately much after the fashion of dementia præcox patients. The patient often makes ukuleles of cigar and cracker boxes and rubber bands, and uses them to stage "concerts" for the other patients. Again, this is just another pathological achievement of his goal of superiority. On one occasion, he spoke vaguely of other patients showing him "brotherly love" as evidenced by their willingness to play athletic games with him on the ball field. This apparently represents a minor addition to his grandiose system.

On one occasion the patient was asked, "Have you been successful in life?" He replied, "I can't think of anything in which I have been successful. I tried to be successful in music but I wasn't." It is interesting that this one vague question revealed a major element in the patient's ego structure.

The question, "What has been missing in your life?" produced a complete block for many minutes. Finally, came the answer, "The Lord has chosen me to show all others how to have harmony in life." The irrelevance of the reply, as well as its grandiose content, again reminds one of dementia præcox.

## Discussion

As one recollects epileptics in general and this case in particular, one is struck by the resemblance of epilepsy to schizophrenia. This patient showed the typical prepsychotic personality of the dementia præcox case—seclusiveness, irritability and jealousy arising early in life and continuing throughout the psychosis. The age of onset of the epileptic psychosis is often earlier than that of schizophrenia. However, in most cases, ages of onset are about the same in the two psychoses. This patient showed marked indifference to his return from parole and life situation in general, as do schizophrenics. He showed obvious decorativeness. He had epi-

sodes of "deterioration" from which he recovered, only to repeat the cycle over and over again. This reminds one of typical catatonic behavior. Many epileptics sink into a state of regression from which they never recover, a condition for which schizophrenics are notorious. This patient's stream was often irrelevant, disconnected and autistic, so is that of the dementia præcox case. His grandiose system of many years duration is typically schizophrenic. Finally, is not the catatonic stupor, muscular rigidity and catatonic excitement basically similar to the unconsciousness, tonic and clonic phase of the epileptic seizure? Certainly, their psychogenesis and morphology have much in common.

## Summary

A case of idiopathic epilepsy has been presented from the point of view of the Adlerian or inferiority school. The patient's personality goal (method of warding off inferiority feelings) was isolated. The patient's emotional history was presented in sufficient detail to indicate that reality defeated the goal, that the patient fled into his psychosis to create an imaginary world in which the goal was realized. Evidence was presented to show the inferiority motivation of epileptic auras, seizures, equivalents, postconvulsvie confusion and interparoxysmal personality.

Mention was made of fundamental dynamic and descriptive similarities between idiopathic epilepsy and dementia præcox.

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# EDITORIAL COMMENT

## GROUP PSYCHOTHERAPY

In its survey of means for reducing the rate of increase in the population of our mental hospitals, the New York State Temporary Commission on State Hospital Problems will doubtless report on the subject of group psychotherapy in due time. Its consideration, however, is commended to PSYCHIATRIC QUARTERLY readers in advance of such formal appraisal.

This issue of THE QUARTERLY includes two articles on group psychotherapy as practised in state hospitals in Illinois and Iowa. The editors consider them to be important. The methods involved were developed in large public institutions comparable to the civil State hospitals of New York and, therefore, should be adaptable for trial in the New York institutions. Point is lent to the possibility of their use in these days of depleted medical personnel by the fact that two of the three authors of the current papers have already left their state hospital posts for the armed services. What little opportunity has existed for individual psychotherapy in state hospital practice is disappearing; and if psychotherapeutic treatment is not to be abandoned for the duration, some such methods as the ones outlined in the present QUARTERLY papers may have to be adopted or improvised.

The literature on group psychotherapy is not extensive. The reference lists appended to the articles in this issue include most of the titles which are readily available. A glance at the articles referred to in these lists will reveal almost as much variety in point of view and technique as there is in authorship of the papers. The two reports in the current QUARTERLY show wide difference in method. This very diversity will, perhaps, serve to illustrate the fact that the general concept of group psychotherapy holds promise of usefulness—most writers note encouraging results—while permitting the individual clinical worker to develop his own theories of conducting therapeutic sessions.

As Drs. Jacobson and Wright note in their current report, success has been claimed with group psychotherapeutic plans based on psychoanalytic ideas, on interviews, and on the employment of music and rhythm—this last with particular reference to the highly successful work of Dr. Ira Altschuler's clinic at Eloise, Michigan. The writers' own method is described as involving the repetition of simple acts under varied conditions which are designed to reeducate the patient in such matters as timing his acts, regaining physical and emotional control, and coping with frustration.

Dr. Blackman's technique is quite different: "The entire ward population sits with the therapist, and a friendly discussion is gradually started." There is explanation of the operation of the hospital, its interest in the patients, its aim to cure, leading gradually to the point where individual patients present their cases to the group for discussion by fellow patients and the therapist. The atmosphere is informal; a patient may preside, with the therapist a humble participant in the friendly talk; and—of particular interest in times of greatly reduced medical personnel—all ward employees are present to learn something about the individual problems of their charges.

Desirability and possibility of variety in group therapeutic procedures are stressed both by Drs. Jacobson and Wright and by Dr. Blackman. The latter's technique, in particular, lends itself to change and adaptation. One therapist, for example, reports successful group psychotherapy with a method in general resembling Dr. Blackman's but differing in detail and involving in addition such features as written autobiographies of the patients, formal discussion of their plans for the future and a cultural program of reading and talk about books, daily news, magazine articles, movies, world events and world outlook.

Writers on group psychotherapy are not suggesting that it be substituted for shock treatment, endocrine treatment, sedation or other forms of therapy which administrators and clinical directors may prescribe or prefer; and THE QUARTERLY is not now making that suggestion. But it is suggested that —faced with the urgent need of getting out of the hospital every patient who can be gotten out—psychiatrists may well study this method as a means of doing for patients in groups what there is no longer time to do for them as individuals.

Group psychotherapy cannot replace deep psychoanalysis or analysis of the individual of whatever kind. The problems it resolves will generally be superficial; gains in insight will usually not be great; and the clinician will, for the most part, be forced to content himself if he sees progress toward even the more superficial sort of social readjustment. But the fact that satisfactory results are reported with such wide varieties of technique suggests that the method may have value peculiar to itself and distinct from the values inherent in other treatments. Improvement of a patient on adjustment to the hospital is a familiar occurrence; but adjustment to the protected institution environment cannot easily be transformed into adjustment to society. Perhaps adjustment to an active group within the hospital, which is a primary aim of group psychotherapy regardless of the method used, provides a better means of preparing for adjustment to outside society than most current treatments do.

Theoretical studies, however, can well wait. The overcrowded mental hospital needs better therapeutic methods without delay. Insulin, metrazol and electric convulsive treatments are justified by the majority of their practitioners on purely empiric grounds. It is suggested here that group psychotherapy is justified on empiric grounds; that any survey of the literature will establish this as a fact; and that all mental hospital clinicians who can possibly find the time to make the inquiry will do well to investigate this rather neglected means of treatment. Its successful employment might do much to lessen the unavoidable burdens of the war emergency.

## THE MATTER OF MORALE

Ever since Pearl Harbor, American official propaganda has been devoted to emphasizing the seriousness of the fact that we are at war. Certain phrases have become familiar with monotonous repetition: "The American people must realize . . . it must be brought home to the people . . . the gravest crisis in American history . . . the nation must be aroused from apathy . . . we must understand we are in great danger." Lately, it has been: "We can lose the war . . . we shall lose the war unless . . ." Finally, the official spokesmen have been saying: "We are losing the war."

Let us submit that it is time to examine and reexamine the tone and effect of these utterances designed to influence the "home front." Their origin and motivation are readily comprehensible. Pearl Harbor was more than a stunning blow. It probably served the cause of national morale better, in the weeks immediately following, to make the public share the guilt of that criminal negligence by blaming civilian apathy rather than to disrupt the armed establishments by public trial of General Which and Admiral What; and perhaps by ouster or impeachment of Undersecretary Where or Assistant Secretary When. It also served the then useful purpose of helping to convince the few whom the fall of France and the stab in the back at Hawaii had not already convinced that we were in no pre-Maginot "bore" war.

Perhaps the question could now be put respectfully to the framers of our war propaganda policies as to whether pessimism has not more than served its purpose. It seems doubtful if there are many Americans above the imbecile mental level who do not have intellectual insight into the fact that we are in the midst of the most serious conflict in our history. The

millions of men in the armed services certainly do not need instruction in this elementary fact of life; nor do their wives, fathers, mothers, brothers and sisters. If there is still wastage of rubber, failure to collect scrap, pressure for political or economic advantage by this group or that, the necessary emotional reorganization for total civilian war effort will still follow in due time. Even the unparalleled Nazi propaganda failed to prepare the German civilian for war overnight. It is a question if our current methods are helping our own preparation.

If there is to be constructive criticism, it should come from the ranks of psychiatrists and psychologists. Among them, with knowledge of the principles of dynamic psychology, should be and are America's experts on morale. THE QUARTERLY does not aver that present propaganda methods are wrong; it suggests that they may be, that a change in tone is inevitable in time; and it suggests that readers consider the matter seriously with a view to making criticisms if warranted.

The military mobilization committee of the American Psychiatric Association, in its pamphlet on "Anxiety and Its Control" lists as "prominent" among the factors which make for undue anxiety "continued threats of danger which the individual or the group has inadequate means of meeting." Our current official propaganda bears at least a slight resemblance to such threats. Also, as the Hungarian refugee Hans Habe pointed out recently in the New York Times, it bears a close resemblance to what Hitler would have us believe—that we are being defeated—if the Nazis launch a peace offensive, they will expect and probably receive aid from appeasers convinced by our own propaganda that we have lost the war. Americans who have followed the course of World War II require no specialized professional training to realize the results of the tremendous impact on the unconscious made by official words and official attitudes. It would be a strange thing if, for the first time in history, a great nation were to bring disaster on itself by deliberately fostering defeatism among its people. It would be stranger yet, if that defeatism were unjustified by the facts. THE QUARTERLY suspects that a survey of the situation would fail to justify the assertion that we are losing the war, although it is a fact, which should be emphasized, that we are not yet winning it and not yet putting forth the effort necessary to win it.

Dunkerque was not made possible, the battle of Britain was not won, Moscow was not saved, and the struggle of Stalingrad was not carried on by peoples whose slogan was, "We are losing the war."

## ELEANOR CLARKE SLAGLE

When Eleanor Clarke Slagle died on September 18, 1942, she had completed more than 20 years of service as director of occupational therapy in the New York State Department of Mental Hygiene. For more than 30 years, her name had been synonymous with the occupational therapy movement in American mental hospitals. Adolf Meyer once called her "the personification of occupational therapy." The American Occupational Therapy Association once honored her with a gift inscribed to her as "the cornerstone in the development and promotion of occupational therapy." Mrs. Slagle was a pioneer and a leader. Before her, there was no planned and sustained program in her field—in the words of a tribute written to her in January, 1938: "Whatever exceptions can be pointed out here and there are found to have been dependent upon the zeal and initiative of some individual, dissolving with the departure of that individual."

The idea from which occupational therapy developed is, nevertheless, very old. It is a single short step from attempts to interest and divert the mental patient by music and conversation to attempts to interest and divert him by persuading him to make or do something. Music was played before Saul; Gregory Zilboorg quotes Soranus as advising, in the early days of imperial Rome, that the therapist endeavor to interest the patient by conversing with him or reading to him on matters concerning his occupation or previous activities; G. W. Henry relates that in the maristan of Cairo, the great public mental hospital supported by the caliphs, daily concerts were given for the patients. But many centuries passed, and psychiatry went through the dark ages before anybody thought to take the step from conversation and music as therapy to occupation as therapy.

In eighteenth century England, the physicians of the mad king, George III, did come close to taking that step through endeavors to keep the royal patient occupied, by encouraging his hobbies and avocations. William Tuke came closer yet when the York Retreat was opened and working in the garden was prescribed for its patients. And Sir W. C. Ellis went the whole way less than half a century later. M. Ralph Kaufman quotes from a work by Ellis which was published in London in 1838: ". . . so important do I consider the diverting the mind by employment, that where the patient cannot be induced thus to occupy himself (in farming or gardening tasks involving no danger), or where the occupation is too mechanical to keep the mind interested, I do not hesitate, with proper precautions, to intrust him with tools, even where an inclination to suicide or to violence exists. . . . In a well-regulated institution, every means ought to be invented for calling into exercise as many of the mental faculties as remain capable of employ-

ment. . . . There should be a modelling room, and a studio, where those who have a taste for the fine arts should have an opportunity of receiving weekly instruction. . . ." Whether Ellis put his principles into practice, Dr. Kaufman does not state; but they did come into active practice only a little later with the opening of Amariah Brigham's school and whittling shop in 1845 at the New York State Lunatic Asylum and with the establishment of a magazine, "The Opal," to be edited by the patients. Dr. Brigham's aim was the modern one of the prevention and overcoming of deterioration. But, to quote a commentator on his work: "Unhappily, his purposes and plans were two generations ahead of his day; with his death the light went out for 50 years."

That the light was ever rekindled was due in no small measure to Mrs. Slagle. When the Chicago School of Civics and Philanthropy offered a course in "Invalid Occupation" in 1908, Mrs. Slagle was in the first group of students. Associated with Jane Addams and Julia Lathrop in social work, Mrs. Slagle, with her background of experience and her study of "invalid occupation," was loaned to Adolf Meyer when the Phipps Clinic was opened at the Johns Hopkins Hospital in 1910 to organize occupational therapy there. In 1917, Mrs. Slagle conducted classes to train occupational therapists at Hull House. From 1918 to 1922, she organized and directed occupational therapeutic work for the institutions of the state of Illinois. As her activities became broader, the workers she had trained continued with therapy and study from the point where she had started.

On July 1, 1922, Mrs. Slagle was appointed director of occupational therapy for the New York State mental hospitals. The endeavors with the mentally ill which had been haphazard and sporadic since the time of Pinel had at last become the unified and sustained program which might have been framed generations before if death had not cut short the life of Amariah Brigham. Under Mrs. Slagle, the benefits of work designed to interest the hand and train the mind became available to the patients of every mental hospital supported by the State. They extended to Craig Colony for Epileptics and to the private institutions. A corps of skilled, devoted workers was recruited, organized and trained. Physical training and recreational activities were encouraged and developed.

Mrs. Slagle carried on her work with extraordinary devotion. She was a woman of broad culture and pleasing personality; but occupational therapy served for her as her work, her recreation, her family and her circle of friends. Her young women therapists might have been her daughters. And she carried her interests and activities in her work far beyond the boundaries of the State. She was a founder of the American Occupational Therapy Association, served as its president, for many years was its secre-

tary-treasurer, and later its permanent secretary. She visited and traveled extensively in Great Britain in the occupational therapy cause. She was unceasing in efforts to promote the use, understanding and improvement of the technique she did so much to develop.

Born in Hobart, N. Y., in 1876, the daughter of William and Emmeline Davenport Clarke, Mrs. Slagle devoted much of her useful life to the service of her native State. She came of a family with a sense of civic responsibility. Her brother, the late John D. Clarke, served for many years as a representative in Congress.

The Department, and occupational therapy workers everywhere in America, will miss Mrs. Slagle, her example and her leadership; but her spirit will continue to inspire the great organization she built. As Adolf Meyer called her, she was a living symbol of a great movement and realization. Perhaps we cannot do better than recall the words of former Commissioner Frederick W. Parsons: "Untold good has resulted from the introduction of occupational therapy into mental hospitals. New York State has been fortunate in having had the benefit of Mrs. Slagle's vision."

## BOOK REVIEWS

**Psychological Effects of War—On Citizen and Soldier.** By R. D. GILLESPIE, M. D. 250 pages with foreword by the author and bibliography. Cloth. W. W. Norton & Company, Inc. New York. Price $2.75.

This book is based upon lectures recently delivered by the author in memory of Dr. Thomas W. Salmon who, called from civilian life, as a colonel in the United States Army acted in an advisory capacity to the government on the organization of psychological services in the war of 1914-18. Dr. Gillespie, who is physician for psychological medicine, Guy's Hospital, London, and wing commander Royal Air Force Volunteer reserve, here presents his first-hand observations of the psychological effects of modern warfare on both the civilian population and the armed forces of the nation with special reference to aspects of the causation of mental disturbance and the question of what can be done to prevent its repetition. We may learn from the experiences of others, as given here, what we may have to meet and how to meet it; and we also gain help in planning for the maintenance of civilian morale and the avoidance of mental breakdown among troops.

To begin with, he deals with "changing concepts in psychoneuroses," physiological, psychological and constitutional, from the notion of demoniacal possession, through the humoral theory to the psychogenic hypothesis first put forward by Brodie in 1837, to the concept of the unconscious foreshadowed by Janet and later developed by Freud. He indicates changes in the symptomatology of the disorder itself that have accompanied these "mutations of theory" and illustrates how the changes were brought about, emphasizing the influence of doctors and the factors of suggestibility in fashioning diseases.

Under the caption "constitutional factors in psychoneuroses," the author differentiates symptoms psychologically produced, symptoms psychologically precipitated, and symptoms psychologically sustained and continued. He considers psychoneurotic reactions to be due to disturbed social relationships and differentiates them from psychotic reactions and from psychopathic personalities—which, he holds, are due to defects in the energy endowment of the individual. These defects may be inherited, acquired or both; and a psychoneurosis may develop on this basis. The pathology of the constitutional psychopath he conceives of in physiological terms and that of the psychoneurotic in psychological terms. Some findings are cited to show the influence of a constitutional factor in psychoneuroses and to indicate that psychological reactions of all types have a familial concen-

tration not wholly explained by transmission by example. This conclusion is further stressed by the correlation of habits, attitudes and symptoms observed in infancy and early childhood with the development of psychoneurotic traits in adulthood. It is strongly suggested that a frank psychoneurosis is only an accentuation of near life-long habits.

Social conditions in relation to the incidence of psychoneuroses are dealt with next. The family situation, particularly the "broken home" (absence of either parent or both), is shown to be of greater significance in the genesis of psychoneurotic reactions than are constitutional factors and the study of both children and adults at various economic levels indicates the insignificance of economic status, provided the psychological home constitution is good. Education does not appear to make one less susceptible to neurological disorders unless it provides a "pivotal" value that justifies life and makes it more worth living. Occupation as a factor is discussed and concluded to be a deterrent from the psychoneuroses in so far as the individual has a choice, a "professional attitude" toward his work, and a sense of responsibility to others. Dr. Gillespie holds the "thwarting of activity" to be responsible for a state of apathy toward life, often observed among the unemployed. Man has been accustomed to think of employment as something to be proud of, and his moral nature is such that he cannot be both idle and at ease. It is the author's contention that some sort of activity is a necessary condition of happiness, and investigators have found that the majority prefer to work, even if the financial gain is slight.

The inbred custom of competitiveness, prevalent in most spheres, is cited as a source of anxiety or sense of insecurity; and certain peoples are mentioned among whom aggressiveness is discounted and cooperation encouraged to the mutual benefit of all. Thwarting of the herd instinct and isolation—regardless of its nature or cause—also contributes to the production of psychoneurotic conditions; and in spite of many dangers and discomforts, people have shown their preference for shelter life and crowded community centers to loneliness in the comparatively safe countryside. Acquisitiveness is demonstrated to be an essential need, only if linked with social aims; and, hence, people are able to see their homes and possessions destroyed in a common cause without breakdowns. "It seems possible that by providing social security, by discouraging the cultivation of power impulses, and by shifting the basis of self-esteem from power and material appearances to solid worth in the sense of cooperation in the community" we should be able to remove one cause for anxious and depressive reactions. Finally, the element of fatigue, long in disfavor as an etiological factor, is shown to have been a basic factor in a number of cases of psychoneurosis; and physical fitness is promoted as a preventative measure.

The incidence of psychoneuroses among civilians is described—those due to exposure to danger and those due to disorganization of living conditions. Very few more cases were reported by hospitals and clinics in London as the result of terrifying experiences; and absenteeism from work, a fair index of illness in any district, was noted as in no degree greater than in peace time. The general health of people on the whole appeared improved; and the male part of the population was more affected than the female. Likewise, the number of minors suffering psychologically as the result of bombing was found to be surprisingly small. In their cases, as also with adults, it was not the idea of physical danger that mattered, but rather emotional conflicts over day to day family problems, many of which were accentuated by enforced changes in the home situation and other conditions produced by war. Thirty cases selected at random from three separate heavily bombed cities are cited to show this; and from among many thousands of children subjected to air raids it was difficult to find instances of "bomb fright," those few who exhibited acute emotional reactions also showing evidence of preexisting psychoneurotic tendencies. Types of disorder are described under "immediate reactions" and "remote reactions," the former being characterized by acute panic, fugue, stupor, bodily manifestations of fear, etc., and the latter by hysterical symptoms, amnesia, and the accentuation of previously existing mental conditions. Symptomatic recovery in the case of some chronic psychoneurotics was noted; and the precipitation of acute psychotic attacks was seen in others. The importance of occupation during the "latency period" in preventing psychoneurotic reactions was demonstrated. Apathy was reported as the extreme form of after-effect resulting from disorganization of the individual's life. Some reactions to bombing, etc., are described as "conditioned or associated," because they were complex-determined, due to the reactivation of experiences of the past.

The effects of evacuation and the development of psychoneuroses and allied conditions in reception areas are reported by a variety of agencies; and the outstanding problems of evacuated children are listed in order of importance or frequency in which they arise. These were due to such powerful psychological factors as feelings of insecurity because of separation from parents and from familiar surroundings, rebellion against new surroundings and general disorganization of the children's lives. Instances where the parents were at fault and where the billet mother or organizations in the reception areas were at fault are cited. Mere disorganization is shown to be the most widespread agent in causing disturbances among both the evacuees and those not evacuated, particularly the children; and some cases are detailed to indicate how many of these difficulties might

be obviated by suitable changes in the environment, which was often more at fault than the child. The value of psychiatrically trained social workers in the proper handling of these cases is here demonstrated, and the need for more help is emphasized. The establishment of hostels in evacuation areas for more difficult children is discussed. The organization of psychiatric services in war is outlined, and constructive criticism is made. Here the importance of physical aspects, of social and recreational activities, is emphasized.

Constitutional predisposition, environmental stress and inner psychological factors are each and all considered in the development of psychoneuroses among the fighting forces. All authors emphasize the part played by the constitutional factor in from 30 per cent to 72 per cent of cases; and the composite personality of one who commonly developed a war neurosis is described in detail. By comparing these cases with other patients in hospitals, e. g., surgical cases, the significance of certain physiological factors and personality traits in predicting future breakdowns under stress is made clear. The etiology of such predispositions is indicated by studies of the parents, which can be related to heredity or upbringing. In those highly predisposed, the disorganization caused by mobilization alone was enough to precipitate psychoneuroses. Educational and temperamental inaptitude for particular jobs resulted in the appearance of neurotic symptoms; and the difficulties encountered by the mentally dull and the psychopath were particularly noticeable. Fear of death or disablement is usually present, and cases are cited indicating the tendency to escape by preformed modes of reaction. The frequency and cause of psychosomatic types of reaction, such as dyspepsia, effort syndrome, rheumatism and reflex paralysis are discussed; and the occurrence of "conditioned" psychoneurotic reactions is explained. Other reactions under the heading of "fatigue and exhaustion syndromes" are described. Traumatic psychoneuroses are reported as occurring both in the "pre-disposed" and in others; and the significance of the so-called "latent periods" in these cases is emphasized. Amnesia is noted as another reaction, as are also depression and states of anxiety.

The subject of treatment is discussed, with emphasis on prevention, the elimination at the time of recruitment of those prone to psychoneurotic ailments, and the early recognition of situations and problems requiring attention among those in action. The importance of early treatment when the disease appears is also emphasized; but it is indicated that return to a useful civil life is the best that can be hoped for in most instances, and it is noted that a serious obstacle to effective treatment is the element of gait associated with persisting illness. High morale and tradition are shown

to be strong fortification against breakdown under battle conditions. Various modes of treatment are outlined, with emphasis on building up the general physique. Where loss of weight has been a prominent feature, a modified insulin technique has been used with good results, not alone in fattening the patient but in clearing up many accompanying neurotic symptoms.

The author dwells on lessons gathered from the small incidence of psychoneurotic reactions in response to air raids, particularly among civilians, and contrasts the value in this respect of freedom of action, individual responsibility and a self-imposed discipline to that of a discipline enforced upon one by authority from without. He feels that behind the national morale of the people is something wider and deeper—an innate pride of race, love of country and freedom, and an "infinite patience and pity that only slowly turns to anger," plus an imperturbable sense of humor.

In his last chapter, Dr. Gillespie tells of the stimulus that war has already given to thoughts and plans for improving social relationships throughout the world. He is optimistic. He views human nature as something malleable and contends that the attitude and behavior of most individuals is decided by the society in which they live. Having in mind the organized hatred brought to fruition within two decades among our enemies, he asserts that peaceful attitudes, being more in accordance with the ways of industrialized society, can be deliberately nurtured and maintained with the outlay of much less energy. Likewise "alteration in social ideals might alter the ostensible nature of individuals in such a way that neurosis would be far less prevalent." Anthropological evidence, he holds, supports the view that traits are selected at least as much by cultural development as through biological transmission. The study of certain primitive tribes would indicate that even sex characteristics may not be biologically determined. The Mungador people develop, by their organization and mode of life, a coarse, aggressive type of individual, regardless of sex; whereas the Arapash discourage all competitive attitudes among their people, and none develop masculine traits. What favors neurosis in one culture may even be normal for the other. From these anthropological studies—of Meade and Benedict—the author sees hope of reducing the incidence of psychoneurotic maladaptations by social means.

Obviously one of the most important factors for insurance against psychoneuroses is security in family relationships. The approach to life should be realistic, and in education second-hand knowledge should only supplement direct observation and experience. Education should aim at character building and emphasize tradition; children should be taught what they owe to their ancestors. This kind of tradition makes egotism, neurosis and war itself less likely. Sound instruction along biological lines, in-

cluding instruction on sex and reproduction, will prevent much morbid anxiety, impotency, frigidity and homosexuality; and the value of children should be realized. A muddled sexual morality and puritanical repressions are condemned as the causes of a crippling sense of guilt. The author notes the effect of war in lessening competition and developing a system of cooperation in the community to which everyone may contribute some usefulness. He believes that a perpetuation of this structure would minimize the occurrence of those social dissatisfactions which produce the neurotic. Thus, it would seem that war itself, by uniting all in a common unselfish cause, tends to produce a stability of purpose and conception of life that augurs well for the future mental health of the nation.

It may be gathered from the foregoing that this is not only a most topical book but that it should be of inestimable value to all who are in any way concerned with the welfare of a people engaged in war.

**Psychoanalytical Method and the Doctrine of Freud.** By ROLAND DALBIEZ. Translated by T. F. Lindsay, with an introduction by E. B. Strauss. 739 pages. Two volumes. Cloth. Longmans, Green & Co. London. 1941. Price $9.00.

In the half-century elapsed since the publication of Breuer and Freud's "Studies in Hysteria," psychoanalysis has undergone a number of vicissitudes from Aristotelian catharsis to the foundations of non-Aristotelian thinking. As Barr, the Austrian novelist, has so aptly put it: "Freud taught the world how to think." Philosophers and psychologists know that thinking is a difficult process, hence the development of psychoanalysis has been attended by as much controversy as usually accompanies revolutionary ideas. Today, it is obvious that a good deal of the opposition to psychoanalysis arose on moral and affective rather than on intellectual grounds, but again it was Freud who pointed out that the intellectual can rarely be freed from the affective. The controversy between psychoanalysts and the antianalysts rages still; but, significantly, the thinkers in the latter group are waning rapidly. It seems like such a self-evident fact that psychology is *not* neurology or neurophysiology that one is surprised at the confusion extant among medical men. When a psychiatrist comprehends that psychopathology is not the same as neuropathology or physiological pathology, he can no longer be against psychoanalysis. For (despite minor differences among psychopathologists) the method and doctrine of Freud remain the *fons et origo* of psychopathology. It naturally follows, and this is borne out by the facts, that clinicians who *know* psychoanalysis cannot be against it.

Although Freud has never laid claim to being a philosopher, a few philosophers, too, have criticized psychoanalysis. So long as philosophy consists of "the theory of knowledge," a philosophical study of psychoanalysis is legitimate. Again, it remains true that when philosophers really know psychoanalysis, they cease to carp against it.

All this tends to confirm Freud's explanation of affective prejudice among his opponents. Aware of this explanation, Roland Dalbiez, a doctor of letters and *agrégé* (instructor) in philosophy, set out to examine the psychoanalytical method and doctrine without prejudice. As he himself states: "If it is vain to believe that one may contrive to eschew all partiality, it is the part of the philosopher to make the attempt." To his credit, it can be said that he has done a fine job. In the first volume, devoted to exposition, he "sets forth" the psychoanalytical method and doctrine. Following, in general, the scheme of Freud's "Introductory Lectures on Psychoanalysis," he summarizes first the psychopathology of everyday life, then the theory of dreams, and proceeds to the sexual theory, neuroses, psychoses, and lastly psychoanalysis and the spiritual life (including sublimation, art and religion). Volume I ends with a short chapter on the structure of the psychic apparatus. This first volume is essentially a restatement of Freud's earlier writings not only in Freud's terminology but in philosophical terms as well, for Dalbiez feels that a good deal of the opposition to psychoanalysis is due to terminology. There are also many comparisons of Freud with Janet and with Jung, Bleuler and others. The clinical portions are freely illustrated with case histories. Where philosophical objections might arise, Dalbiez seems ever ready to anticipate and discuss them and to carry these discussions through to a logical conclusion in conformance with present-day knowledge.

The second volume is devoted to "discussion." The subject matter here is more theoretical and less clinical, although there is no dearth of case material. The idea of the unconscious (the *sine qua non* of psychoanalysis and long a stumbling block to clinical psychologists) is thoroughly discussed and finally accepted to Dalbiez' philosophical satisfaction. He then proceeds to a study of psychic dynamism in which Freud's work is compared with that of Pavlov; and again he concludes "that the criticisms directed against the unconscious character of the Freudian mechanisms must be abandoned." Chapter III is concerned with "methods of exploring the unconscious." As in the preceding chapter, psychic dynamism is proved by experiment, and Dalbiez finally accedes to calling psychoanalysis a science: "If we accept a wider definition, regarding as scientific every correct demonstration of a causal relation, even between strictly individual elements there is no reason why we should refuse to call psychoanalysis a science."

Chapter IV, an examination of Freudian sexology, is an exhaustive and scholarly treatise on sex, genitality, reproduction and the other elements which many critics of Freud have so consistently failed to understand. Dalbiez prefers to believe that this lack of understanding is due to the "confusion of the scientific and philosophical points of view." This reviewer inclines to the opinion that Dalbiez has set up a straw man which he proceeds rather generously to demolish. It is inconceivable that Freud was unaware that the "polymorphous perverse sexuality of children" was absolutely normal. It seems almost that Dalbiez is unconsciously (or consciously perhaps in the rôle of the impartial philosopher) fighting his own inevitable acceptance of psychoanalysis. In some of these passages, one gets the impression that Dalbiez is quibbling over terms. In this respect, a philosopher and pedant may legitimately insist on the exact use of words but he should also strive to observe the spirit of the production rather than the letter.

In discussing "morbid psychic causality" Dalbiez has hit on one of the most potent reasons for resistance to Freud: "It is because he categorically asserts the etiological rôle of psychic factors that Freud has been so fiercely opposed." It is beyond the scope of this review to attempt to evaluate the reasons for such an attitude; that it does exist will hardly be disputed. One of the merits of Dalbiez' work is that the discussion of this attitude is thorough.

The treatise ends with another chapter on psychoanalysis and the spiritual life. The author attempts to make of psychoanalysis a "*Weltanschauung;*" a procedure which Freud specifically disavowed. Here again, Dalbiez seems to be wrestling with a straw man of his own construction. There seems to be no point in attempting to make a philosopher of Freud against the latter's will and direction. Since Freud has stated that psychoanalysis is not a world system, it seems bootless to point out that it does not succeed as a world system. The following quotation from Freud's "New Introductory Lectures on Psychoanalysis" might well have served Dalbiez:

"Psychoanalysis is not, in my opinion, in a position to create a *Weltanschauung* of its own. It has no need to do so, for it is a branch of science, and can subscribe to the scientific *Weltanschauung*. The latter, however, hardly merits such a high-sounding name, for it does not take everything into its scope, it is incomplete and it makes no claim to being comprehensive or to constituting a system. Scientific thought is still in its infancy; there are very many of the great problems with which it has as yet been unable to cope. A *Weltanschauung* based upon science has, apart from the emphasis it lays upon the real world, essentially negative characteristics, such as that it limits itself to truth and rejects illusions. Those of our fellow men

who are dissatisfied with this state of things and who desire something more for their momentary peace of mind may look for it where they can find it. We shall not blame them for doing so; but we cannot help them and cannot change our own way of thinking on their account."

These two volumes are a definite contribution to psychiatry and psychoanalysis. Dalbiez appears to be the first philosopher actually to have taken the trouble to study seriously and understand psychoanalysis before attempting a criticism. He has done more: He has worked (experimented) with analysis and has thus had first-hand experience as well. His criticisms should be well taken by analysts. Some of the criticisms appear to be spurious or hairsplitting as when Freud's terminology is made the cause of opposition to psychoanalysis. (Freud's explanation of affective resistance is much more cogent.) Other criticisms are more than valid (e. g., the question of wish-fulfillment or repetition-compulsion in traumatic neurosis). The chapter on psychoses in Volume I should be read by all clinical psychiatrists. It serves not only as an excellent discussion but as a means of bringing to the English reading public the further development of Bleuler's dynamic psychiatry by Claude, Minkowski and other leaders of the French school who are too little known in America.

All students of psychoanalysis should read this work. In essence, it represents two volumes of commentary on Freud with the clarifying of a great deal which Freud's genius has tended to make too brief. It has been said that almost all psychoanalytical literature really represents nothing more than commentary on Freud; but this reviewer inclines to agree with Dalbiez that Freud has left some questions unanswered. It is regrettable that Dalbiez makes little or no use of the later writings of Freud (such as "Inhibition, Symptom and Anxiety") since he might thus have avoided a discussion of anxiety as Freud first conceived it. Dalbiez also seems not to notice that although Freud changed his ideas he never changed the original publications of the old ideas. When Freud is quoted, therefore, it is important to quote the text in conjunction with the date of publication.

Dalbiez' main theme is that the psychoanalytical method is the most important part of Freud's contribution and that the doctrine of psychoanalysis, i. e., the theory, is secondary. He feels that the method and doctrine have been confused by Freud and his followers and this has tended to confuse and thus generate further opposition among nonanalytical thinkers. To some extent, he implies that he accepts the method completely but the theory only partially. Here is another example of Dalbiez' quibbling. Without denying the fact that he does the world of letters a service by the pedantic exactitude of the division, analysts feel that the importance of the division is greatly exaggerated. The theory grew from the method. If "a

*bad* theory is better than none at all'' surely a *good* theory bids fair to live eternally. And Dalbiez senses this for he says, ''Freud has given psychological thought a new direction from which there is no returning.''

These are the main criticisms of Dalbiez' work and they serve to point up the value of these volumes rather than to depreciate it. Some minor criticisms might be leveled at the use of words such as ''de-repression'' which Brill has rendered as ''abreaction,'' following Freud's use of the word. The translation is excellent; and one regrets that such a fine piece of work had to be executed on the poor quality of paper necessitated by the war. Dalbiez' ''Psychoanalytical Method and the Doctrine of Freud'' cannot be too heartily recommended to all psychiatrists. Psychoanalysts, already well versed in psychopathology, will benefit by the criticism; and those clinical psychiatrists with an *unhealthy* sceptism of psychoanalysis may yet be cured by the impartial discussion of psychoanalysis by a nonanalyst. In addition, Dalbiez' style is technically fine, and the work makes most interesting reading.

**Science and Man.** Twenty-four Original Essays by Ales Hrdlicka, Reinhold Niebuhr, Jacques Maritain, Alfred E. Cohn, Arthur H. Compton, Harold C. Urey, Waldemar Kaempffert, K. Koffka, Brand Blanshard, James T. Shotwell, Carl L. Becker, Julian Huxley, Bronislaw Malinowski, Frank Knight, Lewis Mumford, Walter B. Cannon, Karl T. Compton, Jean Piaget, Philip C. Jessup, Hans Kelsen, Harold D. Lasswell, Edwin G. Conklin, C. G. Jung, Ralph Barton Perry. Edited with an introduction and conclusion by Ruth Nanda Anshen. 502 pages. Cloth. Harcourt, Brace and Company. New York. 1942. Price $4.00.

A reader of this second volume in the ''Science of Culture Series'' will be disappointed if he thinks that by turning to the introductory or to the concluding chapter he can gain insight in advance into the content of this book. The editor, Mrs. Anshen, believes that ''the moral of the tale . . . is the power of Reason and its decisive influence on the life of humanity,'' that these essays constitute ''an epitome of an endeavor [!] to point out the disastrous dehumanization inherent in modern science when Man and Reason are abandoned, to indicate the ineluctable necessity of surrendering the individual will to an immanent and common Reason'' (p. 471). A number of men distinguished in the sciences, theology, and philosophy are enlisted to demonstrate the soundness of her view, which is stated more fully in the introduction. Her concluding chapter is an extended *quod erat demonstrandum*. A perusal of the individual essays does not, however, confirm Mrs. Anshen's opinion. In the end it is apparent that the editor speaks only for herself, and whatever ''synthesizing'' (p. 471) is done, the reader will have to do for himself.

The failure of the editor as well as the contributors to achieve a genuine synthesis must be taken into consideration in a final estimate of this work. This is not to say that the essays (with one or two exceptions) give the impression of being superficial or carelessly conceived. Rather, one senses that the writers felt a distinct challenge in the subject and undertook to meet it; and it is interesting in this connection to observe how much can actually be said in the confines of 15, 20, or 25 pages. Yet, in the last analysis, one is constrained to note that each contributor is talking not so much of Science and Man as of his particular science—Man, all too often, is found less interesting. It is all but impossible for the authors to look upon their own sciences and not see that they are good. This situation is sharply defined in the lack of any attempt whatever to find a common ground shared by two fundamental views of Man's nature, namely the evolutionary, or "scientific," view which compliments Man by speaking of him as "truly a faithful image of his precursors," "the chief product of a great life-tide of millions of years' duration," (Hrdlicka, pp. 26, 42) and the Christian view that "Man is made in the image of God," "Man is *child* of God, *creature and sinner*" (Niebuhr, pp. 57 f.). Yet it is seen that what is needed is to "reconcile science and wisdom in a vital and spiritual harmony," that in "ridding themselves of the remains of a materialist metaphysics" the very sciences themselves "are calling out for a philosophy of nature" (Maritain, p. 95).

One might almost say that the significance of this work actually lies in what is *not* said. One cannot overlook the fact that, excellent as they are, these essays do not reflect in any adequate way the depth of the political and spiritual struggle that is taking place around us. References to the crisis of our day are actually very few in number, and one looks in vain (except, perhaps to Niebuhr) for an attempt to make it intelligible. One must conclude either that scientists have little or nothing to contribute to this important question or that they consider it so trifling as not to deserve extended discussion. In either event, what the scientist *does not in fact understand* is not expected to alter materially his view of the world. And yet, as has been pointed out (Conklin, p. 449), "he knows better than others that the increase and diffusion of knowledge depend entirely upon freedom to search, experiment, criticize, proclaim. Without these freedoms there can be no science." In the light of this predicament one must assess the fact, so cogently stated by Conklin (p. 448), that "in spite of a few notable exceptions it must be confessed that scientists did not win the freedom which they have generally enjoyed, and they have not been conspicuous in defending this freedom when it has been threatened."

It seems quite obvious to the reviewer that what one is dealing with here is a *psychological* problem, and the resistance on the part of the scientist to the recognition of the obvious must be considered as itself part of the problem, a datum requiring explanation. Though running through the work like a thread is the thought that "we still know too little about human nature" (p. 451), it seems not to be taken for granted that it is to *psychology* that one must turn if one has an interest in separating the problem of "what man is" from the equally important, but different, problem of man "as he ought to be." Though this situation might imply a deficiency in psychology itself, it could equally well be interpreted as a weakness of the modern liberal mind for ethical concepts and valuational constructions. So long as man insists on believing that his end is "the harmonious happiness of all mankind" (Perry, p. 460), one should not be surprised to hear it said (p. 461): "If I knew that the universe had the opposite design I should think less of the universe, but not less of harmonious happiness!"

To be sure, psychology is not left without spokesmen, though their contributions are concerned with technical problems. Koffka, e. g., presents a brilliant analysis of what is actually implied by the physicist's attempt to reduce the objective component of observation to the indispensable minimum of "the perception of coincidences of a pointer and a mark on a scale" (p. 175); he succeeds in showing that "the organism of the observer, which seemed to have been so nicely eliminated by the device of pointer readings, remains in the observation situation as an integral part" (p. 177), that "the psychologist is needed by the physicist not only when he observes but also when he systematizes his observations" (pp. 178 f.), and, finally, that the psychologist "alone can ultimately give scientific justification to all science, just because science is part of his subject matter" (p. 182). Blanshard presents cogent arguments against "behavioristic" psychology and "epiphenomenalism" and in favor of the view that "the higher mental processes have a large measure of autonomy" (p. 198). But the important theme that "the principal enemy of man is man's own destructiveness" is stated by Lasswell (p. 405) only to be dismissed.

Mention must be made of Dr. Cannon's success in deducing from the remarkable organizational and functional economy of the body physiologic suggestions as to what the body politic needs in order to function with comparable stability and comparable freedom toward, among other ends, the indispensable one of survival. Knight's excellent essay describes the all but insuperable difficulties that beset the social sciences: "the virtually infinite heterogeneity, and unpredictable variability in time, of the subject matter or data" (p. 327), the fact that "there simply is no real measurement of distinctively human or social data . . . What is called measurement in the so-

cial sciences, including psychology, is the averaging of estimates, and the use of the term measurement is a misnomer'' (p. 328). Malinowski's contribution is in a way the most ambitious in that, by attempting to define cultural determinism, he is trying to provide ''the scientific basis of anthropology.''

The sober fact is that synthesis in science still remains more an ideal than a reality. But so long as scientists formulate ''causality'' largely in terms which implicitly disparage the organismic factor, so long as they fail to see that they cannot rightly both proclaim progress and deprecate the phenomenal diversity of things by concentrating attention solely upon reduction to prior terms in an evolutionary process, the actuality of science is incongruous with the ideal of synthesis in science. On the other hand, a theological position may be no more defensible. An insistence on the fact that there is an ''absolutely primary division of knowledge . . . between speculative knowledge, for the sake of truth alone, and practical knowledge [i. e., what is concerned with man, p. 68], for the sake of action''* (Maritain, p. 94) hardly accords well with the ethical absolutism evidenced in Maritain's view of the problem of evil: ''A man who possesses philosophical or theological practical wisdom, that is to say, who has his mind established in truth as regards the ends of human life, can do evil if his will is not straightforward, if he does not possess and use prudence (and charity)—the devil is an expert theologian—; but this man cannot do evil if he uses his wisdom practically, that is, in extending it, thanks to prudence (and charity) up to the point of the concrete action to be accomplished''* (Maritain, p. 94). Yet, who knows, psychology might assist the theologian if he would let it—and that, too, not in the devil's behalf!

Perhaps Science, Philosophy, and Theology are equally open to a temptation to misconstrue the human predicament. ''The intrinsic arduousness of the things of wisdom,'' as Maritain (p. 71) says, ''is compensated by the long-lived accumulation of common experience which is conveyed in man from generation to generation.'' But an authoritative tradition, whether it be scientific, philosophical, or theological, interferes with practical wisdom about man when it overlooks the perennial truth which Goethe states so well in the words of Faust:

*Was du ererbt von deinen Vätern hast,*
*Erwirb es, um es zu besitzen.*
*Was man nicht nützt, ist eine schwere Last,*
*Nur was der Augenblick erschafft, das kann er nützen.*

*A doubt might be raised here as to the propriety of making Maritain a spokesman for the traditional Christian point of view. Of these two statements, the first is highly suggestive of ''the heresy of the two truths,'' so-called, and the second might seem to imply semi-Pelagianism. This observation is not intended to reflect upon the cogency of Maritain's arguments.

**Sensation and Perception in the History of Experimental Psychology.** By EDWIN G. BORING. 613 pages with Preface and Index. D. Appleton-Century Company. New York. 1942. Price $5.00.

Professor Boring, director of the Psychological Laboratory at Harvard, under the above title has given the second installment in what promises to be an unusually valuable contribution to the history of science. The reviewer says the second installment because this present work continues the story begun in "A History of Experimental Psychology" (1929) which Professor Boring himself describes as an "introduction on men and schools," and because he points forward to still a third work which is described proleptically as "a history of experimentation in other fields—feeling, emotion, learning, attention, action, thought" to be "organized about the 'dynamic principle' that comes into psychology with the determining tendency and with 'choice.'" Professor Boring should not hesitate to continue his inquiry into the history of a science in which his own contributions are of recognized importance. "Sensation and Perception" is a notable example of sound historiography. This is so because the author clearly understands that the history of science is necessarily more than a professional avocation or a mere postscript to what is achieved in the laboratory.

Apart from the technical excellence of his expository style and an obvious grasp of the almost incredibly large body of relevant material—a grasp which the author modestly disclaims for some parts of the field, referring to himself in this connection as a layman—it is obvious that the work proceeds on the basis of a carefully thought-out conception of how the historian of science should go about his task. In the preface, Professor Boring writes: "Mountains in labor may bring forth mice. One such mountain was nativism vs. empiricism, and another was Weber's law. If I were trying accurately to reconstitute the psychology of the late nineteenth century, I should have to draw these mountains large, letting them obscure smaller and more fertile objects. Actually, I have painted them in small, and in the distance as seen by the naked eye from the point of view of the present, whereas some other remote details I have enlarged telescopically. But that, I realize, is not quite History." As a matter of fact, the body of the work shows that Professor Boring's diffidence is unnecessary. History involves necessarily a definite point of view, and Professor Boring's is an eminently judicious one.

In the extensive bibliographical section appended to the separate chapters, material inspected by the author is carefully distinguished from that which he knows only by report, the latter being marked by the identification

n. v., "Not viewed." It is a little matter, but one which is too frequently lost sight of—the reader of connected historical exposition needs to have his mind constantly refreshed about dates. I have never seen this matter better stated (x): "The reader needs, I believe, to be given, constantly and repeatedly, explicit temporal orientation, so that he can, if he will, pause to think: 'That was just before so-and-so published such-and-such; he might have known better a few years later.' "

The body of the work cannot usefully be summarized in a short review. It is a compact account of the often painfully slow and always step-wise accumulation of knowledge, partial comprehension, erroneous theory, which has taken place for the most part through recent centuries in the field of sensation and perception. Though clear, it is always slow reading and, for a layman in experimental psychology such as this reviewer, sometimes hard reading. As the author recognizes, this work is in a sense a handbook on the subject which it treats. Its analytical bibliography will make it an indispensable item for any scientific reference library. The reviewer hopes, however, that its use will not be confined to reference purposes: it is really a readable book and should commend itself to physicians, psychiatrists, neurologists, musicians, oculists, artists, indeed to all professional men who are in any way concerned with sensory process. The book ought, furthermore, to be of interest to all specialists in the history of science as a model of correct methodology in this field.

One does not find significant inequalities in the treatment of different departments of the subject. Probably the *Gestalt* psychologists will feel that their work has been handled in a somewhat sketchy fashion, though all in all the reviewer does not believe that an increase in the size of the work of, say, 50 pages in the interest of presenting more fully the phenomenological point of view would have been justified in the light of Professor Boring's actual purpose in writing. Be that as it may, the author is quite successful in taking a position as to the merits or demerits of psychological theories growing out of experimentation without seeming to be partisan, controversial—even without appearing to be unfair to points of view which he regards as superannuated or one-sided.

In the last chapter concerning scientific progress Professor Boring advances the thesis that "much can be said for an effort to understand the nature of scientific progress by an examination of its inhibitors." Without undertaking to reproduce here the author's compact and cogent analysis of these inhibitory circumstances, the reviewer will close with the suggestion that no reader who opens the book, if only for reference purposes, close it finally until he has read this, its concluding chapter.

**Methods of Treatment in Postencephalitic Parkinsonism.** By HENRY D. VON WITZLEBEN. 138 pages with bibliography. Grune & Stratton. New York. 1942. Price $2.75.

This monograph is the result of the author's personal experience with the treatment of a large number of patients suffering from postencephalitic Parkinsonism in this country and abroad. The discussion includes an extensive review of the literature.

The first chapter is devoted to the diagnosis and differentiation between postencephalitic Parkinsonism and other forms of Parkinsonism, especially paralysis agitans and the arteriosclerotic form. Various types of treatment are briefly but adequately discussed, including chemotherapy, serum, vaccine, surgical, fever and Roentgen therapy.

Treatment by the alkaloids is explained in more detail, especially the Bulgarian treatment, using the total extract from the roots of atropa belladonna. This method, combined with physical therapy, is the author's recommended treatment. There is no routine schedule in administration of the drug. According to the author's experience, each case should be treated individually, beginning with small doses, to determine the optimal dose. In his series of 827 cases, 71 per cent were able to return to work, while an additional 18 per cent showed marked improvement; only 4 per cent showed no improvement.

The text is written in a clear, concise manner with frequent references to other authorities. The careful differential analyses, evaluation of treatment methods, and the bibliography of 24 pages make this book of great value to any physician treating postencephalitic patients.

**Psychobiology and Psychiatry.** A Textbook of Normal and Abnormal Human Behavior. By WENDELL MUNCIE, M. D. 545 pages with an historical survey in bibliography of the principal reaction sets and an index. The C. V. Mosby Company. St. Louis. 1939. Price $8.00.

This has obviously been a labor of love. It is a fairly good exposition of Meyer's concepts despite its diffuseness and repetitiousness. That it should attempt to proselytize is not unnatural. However, there is a rather monotonous reference to research projects from the author's hospital, and the sheer naïveté of the following is astounding:

"These disorders are called merergasias, from *meros*—part; or kakergasias, from *kakos*—bad (Meyer) and also are commonly referred to as the 'psychoneuroses,' or 'neuroses' for short or the 'minor psychoses.'" Against this may be placed: "In general, the psychobiological viewpoint is today the common property of American psychiatric work."

The volume does not cover the entire field of psychiatry adequately enough to be recommended as a text or reference work. On the other hand Dr. Muncie should be praised for the section on treatment and his underlying philosophy bearing thereon.

The plan of teaching psychobiology like histology as preparation for pathology in the medical curriculum, despite the questionable objectivity of the student autobiographer, is an excellent means of orientation. Psychobiology is defined in one place as—"the study of those functions distinctively human, the things man is best known for, the mentally integrated performances." Ergasia refers to the mentally integrated person—function or behavior, implicit and overt.

Psychoanalytical material is not well handled at certain junctures and one receives an impression of a tongue in the cheek attitude. As instances, the reviewer might refer to the discussion of the super-ego on page 34 and the interpretation of the vision of the man in the long black cloak in Case 7387. To one knowing human behavior the reference to "the *asexual* (reviewer's italics) interdependence, attachment and aversions" under "gregarious and social 'instincts'" is queer. In describing behavior, the preferred term "conditioned response" is an apt change. The distinction between complex and sentiment is unclear. Muncie's view runs contrary to the opinion of other authorities who hold that childhood illness without physical sequelae may form the stuff from which neurotic symptoms are later elaborated. Again, the discussion of leisure and spontaneity is sound, as is the following conclusion:

"Children who never outgrew dependence are apt to seek a parasitic existence in adult life. The most potent host today is the state. Such dependent persons may be expected to look with more favor on the growth of governmental control of personal life than do independent children, who likely will jealously guard that independence in later life. Modern dictators know this lesson only too well. Parents, forced to silence by dictatorship, find themselves displaced in the training of their children by the representatives of the all-powerful state, and the children accept blindly the teachings of the state."

The condensed examination for general consultation use seems practical, but, to the reviewer, some of the charts reproduced in the text do not. Serious defects of style serve to make unclear portions of the section entitled "Somatic Findings and Problems."

Mental defect, psychopathy, acute hallucinosis, involution psychoses and some others, particularly those classified under miscellaneous organic deficit reactions get scant treatment in this book. The scientific basis for the diagnosis "General Nervousness" and the cases cited to illustrate this con-

ception are not impressive. The unfortunate terminology "Compensation Neurosis" does little for psychiatric prestige and is self-contradictory. On the contrary the comment relative to "the basic ineptitudes of the compensation laws, in which final settlements are not final" is well taken. Paranoid reactions in the deaf and agitated depressions are well presented, as is schizophrenia, although the classification offered is labored and has little to commend it over the official classification. The case quoted illustrating manic excitement is a vivid presentation, but, generally, too many cases have been inserted, containing too many negative findings and resembling their fellows too closely. The present-day hospital administrator will smile at Muncie's assumption of idle patient manpower in recommending weaving in addition to cutting and hemming bed linen. The reviewer is not taken with the "Historical Survey in Bibliography of the Development of the Concepts Underlying the Principal Reaction Sets (Except the Organic Deficit States)" spread over an additional 181 pages.

Although treatment methods involving shock therapy, neurosyphilis and senile reactions are not dealt with exhaustively, it may be emphasized that the section on treatment, is well done. The book reflects good technique in the psychiatric handling of the patient.

**War Medicine.** A Symposium. WINFIELD SCOTT PUGH, M. D., Editor. 565 pages. Cloth. The Philosophical Library, Inc. New York. 1942. Price $7.50.

In the preparation of this timely book, the editor has had the assistance of Edward Podolsky, M. D., associate editor and Dagobert D. Runes, Ph. D., technical editor. The book is a symposium made up of contributions by numerous military and naval surgeons and some others. Thirty-three of these contributions are under the division of "Surgery;" 10 under the division, "Aviation and Naval Medicine" and 15 in the division captioned "General Medicine." The first section of 330 pages treats of the conditions of surgery as practised in war; those pertaining to gunshot wounds, those pertaining to concussion, the diagnosis and treatment of shock of various degrees and punctured wounds. Indeed, the whole field of war surgery is adequately covered in the space available.

The section on "Aviation and Naval Medicine" of more than 100 pages has to do with disabilities encountered in high altitude flying, in deep-sea diving, injuries inflicted by sudden compression and studies of cardiology and hypotension.

"General Medicine" comprises all those conditions peculiar to military service. It treats of the treatment of gas casualties, nutrition of the sol-

dier, allergic conditions, the instructions for the employment of serum, omitting those diseases and conditions which are ordinarily found in textbooks on general medicine.

Many of the articles have been previously published in medical journals, and all are acknowledged.

Of particular interest are several contributions by psychiatrists, among them one on "The Psychopath in the Armed Forces," by William H. Dunn, M. D., and "Selective Service Psychiatry," by Prof. Dexter M. Bullard of Georgetown University. Psychiatric topics are touched upon by other authors. A paper on malingering by Col. Albert G. Hulett is to be commended. Colonel Hulett discusses malingering from the psychiatric viewpoint. He recognizes the importance of the character difficulty which is present in the more overt examples of malingery. He very truly points out that one who pretends to be well and fit for duty when he is not, is—if his pretense is intended to gain him some desired end—as much a malingerer as one who pretends to be sick when he is not. Perhaps the one might be considered admirable and courageous; but, even so, he gives an instance of false pretense; and it is important that such individuals be recognized, not only for their own welfare but for the good of the service.

Col. Hulett has full appreciation of the difficulties of distinguishing between the psychoneurotic and the malingerer and deplores the lack of such discriminating knowledge among untrained army surgeons. He quotes a medical reserve colonel, who, incidentally, is a surgeon in private life, who said: "A psychiatric specialist is not needed for the identification of psychiatric cases among our draftees, any civilian doctor of reasonable experience can promptly and assuredly diagnose any such." It is astonishing that a medical reserve officer can reach the grade of colonel and yet be so ignorant of fundamental facts concerning an important medical specialty. Unfortunately, this gentleman does not stand alone. There are many others who entertain similar mistaken notions and give voice to them.

The reviewer would like to commend also Dr. Dunn's discussion of "The Psychopath in the Armed Forces;" a type of unstable individual many times difficult to recognize until one has lived with him for a while and yet such a pernicious influence in the services. All such persons are properly regarded as menaces. Their capacity for misrepresentation and their tendency to disseminate dangerous suggestions render each psychopathic individual of the pronounced type a potential enemy of the cause.

Prof. Bullard's discussion of "Selective Service Psychiatry" is admirable. He too discusses the psychopathic personality, as well as the manic-depressive personality, the schizoid, and related states.

The book should be in the possession of every medical officer and would serve admirably as a parting gift from the friends of newly-commissioned medical officers upon their departure from home.

The editors have selected the articles with excellent judgment to make the book a well-rounded treatise on medical and surgical conditions affecting the service man. The pages are well printed in readable type, and the illustrations are aptly chosen.

**Your Mental Health.** A Classic Guide to Mental Hygiene. By B. LIBER, M. D., Dr. P. H., B. A., B. S. 401 pages with glossary and index. Cloth. Melior Books. New York. 1940. Price $3.00.

In this day of liberal education, a constant stream of volumes leaves the presses in which the authorities attempt to reduce the various sciences to simpler terms for the "intelligent" layman. The intent is commendable in spite of the implied flattery. These volumes cover a mass of material and of necessity assume the character of compends and as such are dogmatic. All viewpoints cannot be presented. This situation is particularly true in "Your Mental Health." The author has presented a collection of abstracts of cases from his practice. Such a presentation has the inherent weakness of books of this nature. He has anticipated certain forms of criticism by saying, "Of course this is not a textbook of psychiatry in the ordinary sense and the author does not wish it to be regarded as such. All he intends to do is to bring before the medical and intelligent lay public, the cases of transition between mental health and mental disease, apparently neglected by other authors." There is much that will excite disagreement in the mind of the "intelligent" reader. The book should be avoided by some according to Dr. Liber. Some of the cases abstracted seem fantastic; others present such a wide divergence from the normal that they can only add to the reader's confusion.

There are many statements to which physicians and laymen alike will take exception. At the very beginning we have that previously oft-repeated assertion that "Child delivery in the U. S. is just now, one of our dark blots. Maternal and infant mortality is higher than in less civilized countries." This positive denunciation is unsupported. On the next page we learn that alcoholism "results in mental disturbances of various degrees." At a later stage, this opinion is further elaborated. In the section on "Child Up-bringing" we find, "Yes, corporal punishment still holds sway everywhere, alas! even among progressive parents. No matter under what condition it is being applied, it is nevertheless but a cowardly and barbarous act, proving only the adult's muscular superiority and the dependence of the child." But the reading parent may counter with the reply that spank-

ing the child may just as well engender a healthy respect for his parents. Add the concept that "marriage in one form or another is purely human," and that "the poorer classes whose sex life is altogether cleaner and less soiled with perversion and money matters than that of their social superiors, enjoy more successful, less troublous, if simpler, conjugal unions." Is the latter a plea for continuance of that poorer class state? This is notwithstanding the author's appeal to "intelligent" readers and the presentation of perversions and cases of discord.

It is admitted that these citations are singled out from the book, but, by their very controversial nature, a feeling of doubt is cast on the whole structure. The psychiatrist will sigh with envy at the facility with which many of the problems are solved. The reviewer is forced to the opinion that much that is written will only serve to antagonize the "normal" person. The volume becomes a superficial presentation of abnormal situations with insufficient exposition to merit its description as "A Classic Guide to Mental Hygiene."

**Social Learning and Imitation.** By NEAL E. MILLER and JOHN DOLLARD. 341 pages. Cloth. Published for The Institute of Human Relations. Yale University Press. New Haven, Conn. 1941. Price $3.50.

Human behavior is learned; and imitation, as one of the manifestations of human behavior, is not innate but is learned. To establish this idea, Miller and Dollard first built up with much detail and thoroughness one theory of learning, using test animals and humans in both controlled and naturally occurring illustrative situations. With this as a fundament, they go on to explain that the two most common forms of imitation—matched dependent behavior and copying—are also learned. They are learned for the same reason that one learns anything else: because there is a need for learning them and more particularly because there is a reward for doing it.

The learning of imitation has compensations other than the merely immediate goal. It is imperative to culture that man learn to imitate. No one has the time in this complex life to try out more than a comparatively few things by a "trial and error" method. The chances against a baby putting together the two syllables "da" and "dee" (to make "daddy") without an encouraging relative acting as model, are statistically astounding. The chances of his saying it again, unless rewarded by a lot of extra attention, fondling and further encouragement through repetition by the model, are almost equally improbable. However, the possibility of his saying it the twentieth or fiftieth time, with appropriate rewards each time, is well within the realms of reason. According to the authors, the child

has reaped the fruits of learning to imitate long before this stage, and with this and other examples impressed upon his growing mind, he soon becomes acutely aware of the wisdom of imitation as a virtue in itself.

From this the child passes on to that period where he tries to imitate too often and too much, where he wants to do everything his father or his older brother does. Then, later on, according to his intelligence and cultural breeding, he learns to discriminate among his models and the actions he desires to imitate. His thoughts, his ambitions, even his type of reaction to a situation, are usually all dictated by the persons he has chosen to copy.

This book is a scientific treatise on the subject. The authors have made the study rather extensive, having whole sections devoted to crowd behavior, social conditions and copying in the diffusion of culture. The large appendix includes criticism of other works which have been written on the subject. However, the book is not easy reading and is certainly not for popular consumption. While the general continuity is good; in detail it is in many cases too replete with unnecessary definitions, illustrations and footnotes to make the page-to-page reading easy to follow. With the exception of the sensational description of the lynching of a negro, the book has a textbook quality to it that one is seldom permitted to forget. Nevertheless, when the reader finishes, he feels that he has indeed added something to his knowledge, the substance of which he will remember for a long time. The book should be of interest to teachers and psychologists, particularly those working in the field of child behavior.

**The Company She Keeps.** By MARY MCCARTHY. 304 pages. Cloth. Simon and Schuster. New York. Price $2.50.

Margaret Sargent is a lady who has been greeted by some lay reviewers with skepticism or disbelief. Neither the psychiatrist nor the person familiar with New York's semi-radical literary circles will find anything incredible about her. They know her intimately; they have met her many times.

Mary McCarthy's novel is a series of vividly written biographical sketches. What happens to an attractive and talented girl in her twenties, freed from the inhibitions imposed by a New England Puritan father and an Irish Catholic aunt, and living by self-framed standards among the literary rebels of New York? Divorce, Trotskyism, serious lovers and casual sex are some of the answers. The company she keeps is the sort which many a girl has met under similar circumstances. Mary McCarthy has written a brilliant and bitter collection of tales about it.

Margaret Sargent and her friends are presented in jewel-sharp portraits, the discarded husband and the "Young Man," the psychopathic Mr. Sheer, the "genial" host, the man in the Brooks Brothers shirt, the new husband whose verdict was, "You always were a slut," and the impersonal psychoanalyst. There is bitterness and cruelty in some of the analysis—"Portrait of the Intellectual as a Yale Man;" and some reviewers have taken Miss McCarthy to task for having modeled characters "viciously and unfairly on actual literary figures." The present reviewer would not know about that; but it seems only fair to observe that the heroine herself is treated the most brutally, is, in fact, treated ruthlessly.

To an extraordinary extent, this novel is the record of psychic conflict and development. "She knew that she did not cry or make disgusting scenes or have cheap tastes or commit adultery (unless she were *very* much in love). . . . If you cannot love, stop attempting it, for in each attempt you will only reveal your poverty, and every bed you have ever slept in will commemorate a battle lost. . . . If she had not yet embraced a captive Nazi, it was only an accident of time and geography, a lucky break."

Margaret Sargent's life is pictured in a series of sharply separated incidents; but it moves, nevertheless, toward an inevitable climax, the necessity to understand the self which culminates in a psychoanalysis. It is an analysis which somehow succeeds better in conveying the impression of reality, of psychic struggle, of resistance, of transference and countertransference than is found in many a sober, clinical record. It is permissible to hope that the lady eventually gained more than the despairing reconciliation to psychic disunity which is the note on which the record closes.

"The Company She Keeps" is fiction of keen psychiatric interest, not the least important aspect of which is the patient's own analysis of the analyst and his function. "With Dr. James you were safe." But:

"Would she have done better, she wondered, to have gone to one of the refugee analysts, or to one of the older men like Brill? Many of them were intelligent, and they had another merit, they were peculiar. You could see at a glance why psychoanalysis had attracted them. They suffered from migraine, divorced their wives, committed suicide, bullied their patients, quarreled with their colleagues; they were vain or absent-minded or bitter or dishonest—there was hardly a one of whom it could not be said, 'Physician, heal thyself.' And popular opinion was wrong when it held that an analyst's personal failings disqualified him as a healer. Psychoanalysis was one of those specialized walks of life, like the ballet or crime or the circus, in which a deformity is an asset; a tendency to put on weight is no handicap to a professional fat lady; moral idiocy is invaluable to a gangster, and the tragedy of a midget's life occurs when he begins to grow. What Dr.

James and his young American colleagues lacked was, precisely, the mark of Cain, that passport to the wilderness of neurosis that the medical schools do not supply."

Extreme, of course, but many a psychotherapist could profit by the reading.

**German Psychological Warfare.** Survey and Bibliography. LADISLAS FARAGO, Editor. 133 pages. Paper. Committee for National Morale. New York. 1941. Price not stated.

War as waged by the Nazis is primarily psychological. Armed conflict is only an incident in the Hitler national program. Munich was as great a victory as the break-through of the Maginot line. An objective won without bloodshed is better than a battle by the measure of the saving in blood. It is merely an incident, if not an accident, of history that the German plan of conquest has been opposed by men with weapons in their hands; and psychological war continues to be waged, along with the operations of submarines, dive bombers and tanks.

"German Psychological Warfare" is an inclusive and exceedingly compact survey of the means by which this Nazi war in the mind operates. It is a summary of the methods which Hitler has used and is still using to destroy military and civilian morale in the nations opposing him; and it is a manual on the training of the German armed forces in the practice of psychological warfare and in defense against its practice by the enemy.

Germany's preparation for the current war began immediately after her defeat in World War I. Long before physical rearmament could be attempted, the task of psychological preparation was under way. The general outline is familiar and need not be reviewed here. The details are less well known. They may be summarized by saying that the Nazis have prostituted psychology and psychiatry to a hardly credible degree and with extraordinary efficiency and success. The sciences of the mind have been employed in the selection and training of men for the German armed forces to an extent which makes their current use in America seem childishly amateurish. That this employment has been utterly dishonest and coldly cynical cannot detract from its record of accomplishment. Whatever may be the civilian state of mind, the German army evinces a chilled steel morale; and this volume outlines the manner of its building.

The Nazis have been practising for 20 years much that America has still to learn and much that America must learn to survive, for it is idle to imagine that Germany can be defeated without knowledge of her most important weapon of warfare—psychology—and improvement upon it. "German Psy-

chological Warfare'' is an authoritative outline of this lesson which America must learn. Besides a compact review of Hitler's psychological methods, it contains a comprehensive 66-page bibliography of German works on the subject with brief notes of their contents, and a four-page glossary of propaganda and military terms. There is one notable omission; that is, there is no discussion of the psychology of terror, which many Americans, remembering the fall of France, would consider the most powerful psychological weapon in the Reich's armament. That has been adequately discussed many times elsewhere, however, and the subject matter of this book has not been.

The Committee for National Morale has compiled a study which ought to be in the hands of every psychiatrist serving in our armed forces and in those of all persons concerned with civilian morale.

**Artistic Behavior in the Abnormal:** (A Survey of the Literature on) II. Approaches and Interrelationships. By ANNE ANASTASI and JOHN P. FOLEY, JR. Annals of the New York Academy of Sciences. Vol. 42, Art. 1. Edited by Erich Maren Schlaikjer. 111 pages. Paper binding. New York. August 11, 1941. Price $1.25.

This survey is undertaken by the authors under the auspices of the Columbia University Council for Research in Social Sciences and constitutes the second of a series of literature surveys dealing with artistic behavior in mentally abnormal or unusual people. The first survey points out the historical and theoretical background, the third reveals spontaneous production of the ''insane,'' the fourth tries to confine itself to purely experimental investigations.

There are 366 references appended (1912-1941) presumably meaning a considerable amount of labor in assembling, classifying and interrelating. The authors attempted to systematize the literature about artistic behavior under three major approaches: 1. Artistic; 2. Psychiatric, (a) diagnostic value, (b) therapeutic value; 3. Psychological. There is, of course, some overlapping. The literature is again reviewed in its interrelationships to primitive art, the productions of children, the work of artists proper, as well as the so-called artistic expressions of certain cultural groups. The alleged relationship of genius and ''insanity'' is viewed more or less critically and also the assumptions of etiological implications of personality traits and artistic ability.

For those who want information about literature dealing with ''artistic behavior in the abnormal,'' this survey will be of time and effort saving assistance. The interested artist or other lay person, besides the psychiatrist and psychologist, will probably draw his own conclusions. Further papers about artistic behavior are planned and announced by the authors in their introduction to the present volume.

**Personality and Mental Illness.** By JOHN BOWLBY, M. D. 288 pages. Cloth. Emerson Books, Inc. New York. 1942. Price $2.75.

The subtitle of the book is "An Essay in Psychiatric Diagnosis." Dr. Bowlby is a well-known London psychiatrist. He is connected with the London Child Guidance Clinic and is a physician in the London Clinic for Psychoanalysis. He has been interested in child psychiatry for a number of years, has written articles for the International Journal of Psychoanalysis and other publications. As would be assumed from these associations, Dr. Bowlby has a modern viewpoint with reference to mental disorders. He quotes, in the body of the text, August Hoch, Kirby and Bowman, as well as Kraepelin, Bleuler and Kretschmer. He sees mental disorders not in terms of disease processes but of personality weaknesses and defect. He is more concerned with treating the individual than the disease.

From his experience, he has found that the most satisfactory approach to the understanding of psychiatric problems is to investigate, first of all, the type in which the individual should be classified. He believes that for a proper diagnosis and prognosis, and presumably for treatment also, four general questions must first be considered. A, the patient's genetic type; B, his personality subtype; C, his degree of instability; D, his present state and how it developed. Investigation along these lines will be comprehensive and will establish the background upon which one may then judge of what can be done with reference to the problem before the physician. These types are each subdivided. The genetic type, for example, Dr. Bowlby divides into syntonic, schizoid and any other, including the epileptic. Under the caption "Personality type" there are no less than eleven subheads. They range all the way from cautious obsessive, anxious depressive and the hyperthymic on to the apathetic asocial and the shameless antisocial. Then, the author attempts to define the degree of instability—very stable, fairly unstable, very unstable.

In the language of the market place one would say that Dr. Bowlby "has got something there." The general idea and plan is admirable because when carried out with care the important elements of the personality are disclosed and become recognizable. One must be slow to offer an estimate of the value until he has worked with it. The present reviewer has not had that opportunity, but he has worked with psychiatric classifications for many years and has many times been exasperated by their limitations. He has found that often patients do not fit accurately into these pigeon-holes. Indeed, the manifestations of personality vary under varying conditions. In other words, the variables prove difficult to handle. One who may under

one set of circumstances be recognized as a cheerful hyperthymic may the next day have the appearance of a quarrelsome hyperthymic. Something has displeased him. He cannot adapt himself to some situation which has been presented to him. How much latitude is permissible between the very stable and fairly stable and between fairly unstable and very unstable? Two observers, seeing the patient on different days, would perhaps not agree upon the proper classification of the individual. But if one takes these suggestions into consideration in sizing up the assets and liabilities of the man before him, the psychiatrist will come to a sounder conclusion than if he had not these guides in mind. They furnish starting points and terminals which are often practical and useful. If one can avoid dogmatism and recognize the significance of variations he is less likely to commit errors than if he tries to put everything into set patterns. This is not to say that Dr. Bowlby has shown a narrow vision. The contrary is true. Though he sets down his classification of personalities, he does not insist upon their validity. Rather, this item should be regarded as a stepping stone which may be employed or passed over without losing sight of the objective.

Dr. Bowlby makes it clear in the beginning of his preface that the book is not a textbook. It is not addressed to students or beginners. It is indeed an essay intended to facilitate the classification of psychoneuroses. It is based upon his observations over a period of years. It is recommended as a thoughtful clinical discussion.

## Other Publications Received

THE EFFECTIVE PRESENTATION OF SCIENTIFIC REPORTS. By Robert D. Potter. 4 pages. Without covers. Reprint: Science, 95, 2472:503-504. May 15, 1942.

This is a reprint of a communication to the magazine "Science" from Robert D. Potter, science editor of "The American Weekly;" and it is as compact and sound criticism of current scientific presentations as this reader has seen. It is conceded that it would not be possible in all cases to follow Mr. Potter's advice—based on many years reporting of scientific meetings—which is to prepare separate reports for verbal delivery and for publication, making the former brief and not too technical and incorporating full findings and all technical details in the latter. Prospective writers of reports for interhospital conferences or local psychiatric society meetings would do well to consult Mr. Potter's brief notes in the original contribution to "Science" or in the reprint.

INTERNATIONAL JOURNAL OF SEX-ECONOMY AND ORGONE-RESEARCH. Vol. I, 1 and 2. Theodore P. Wolfe, M. D., Editor. New York. 1942. Price $1.25 a copy, $3.00 a year.

These are the first two issues of the new official organ of the psychiatric school headed by Wilhelm Reich, M. D., European refugee psychiatrist and former Vienna and Berlin psychoanalyst. He came to the United States from Norway in 1939. This journal should be consulted for an outline of his views and methods of therapy. At the risk of much oversimplification and of lack of comprehension on the part of this reviewer, the tenets of Dr. Reich and his followers may be said to include: (1) The assertion that there is a natural, radiant energy, differing from electricity and other familiar forms, closely allied to life processes and involved in the spontaneous generation of life—an energy called by Reich "orgone" energy and reported by him to be of value in cancer treatment. (2) The theory that the neuroses are caused by failure to achieve "full orgastic potency," that the orgasm must be differentiated from erection and ejaculation; that failure of complete discharge of vegetative or sexual energy through full orgasm results in a damming up, with consequent neurotic disturbances; and that treatment by "vegeto-therapy" and "character analysis" should aim through long analysis of a type somewhat different from psychoanalysis to discharge the tensions caused by the dammed-up energy. The journal is to appear three times a year, and the editor is an American psychiatrist.

YOUNG PEOPLE IN THE COURTS OF NEW YORK STATE. Legislative Document. 309 pages. Paper. Albany. 1942.

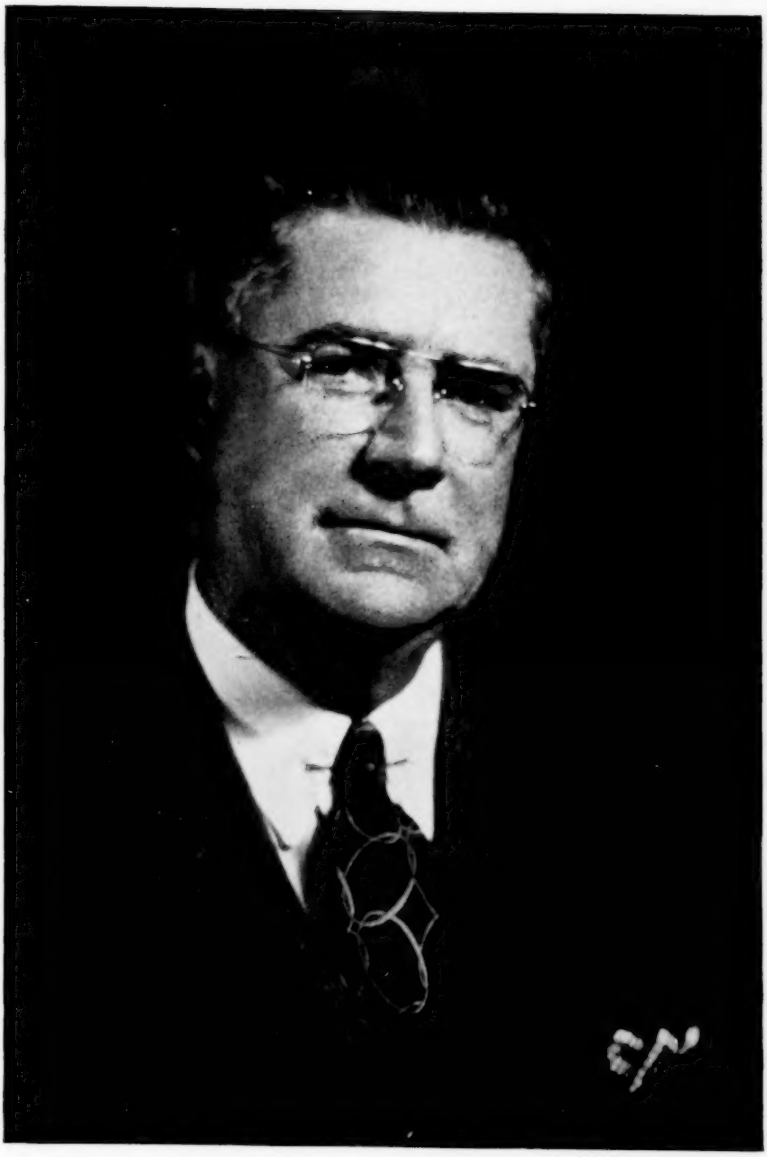
This is the fifth report of the joint legislative committee which has been studying since 1937 the problems of children's courts and of minors from 16 to 18 who are now under the jurisdiction of adult courts. The committee submits an exhaustive review of children's court procedure and of treatment of youthful offenders, with draft acts for the establishment of special courts, "mainly non-criminal" in proceedings and without jury facilities for the trial of persons from 16 to 19 on charges which do not involve life imprisonment or the death penalty. There is a comprehensive review of practice in other jurisdictions; and in the discussion of institutional treatment, the British Borstal system comes in for praise. The committee recommends further study of the institutional problem. Although the psychiatric aspects of crime by youths are not emphasized, this report contains much valuable material for the psychiatrist or social worker in mental hygiene clinics.

## CHRISTOPHER FLETCHER, M. D.

Christopher Fletcher, M. D., who has acted as superintendent of Buffalo State Hospital on numerous occasions since 1924, was appointed superintendent on July 1, 1942. He succeeded H. Beckett Lang, M. B., who was appointed assistant commissioner of the Department of Mental Hygiene on January 1, 1941. Dr. Fletcher had been acting superintendent at Buffalo since that date.

Christopher Fletcher was graduated from Tufts College Medical School in 1906; and in November of that year, he entered the New York State hospital service as interne at St. Lawrence State Hospital. Except for a two-year period from 1908 to 1910—during which he was resident physician at the New York State Relief Corps Home at Oxford and later a postgraduate student in Boston—he has been in the State service ever since. He was an interne at Utica State Hospital in 1910 when he was promoted to assistant physician at St. Lawrence. He transferred to Willard in 1911; and in 1912 he became second assistant physician, now senior assistant physician, at Buffalo, in charge of the reception service. He was promoted to first assistant physician in 1924.

Dr. Fletcher has been active in mental hygiene and child guidance clinic work. He is a member of his county and State medical societies, the American Psychiatric Association, the Buffalo Academy of Medicine and the Buffalo Neuropsychiatric Association.



CHRISTOPHER FLETCHER, M. D.

## NEWS AND COMMENT

### DR. CHARLES E. ROWE DIES

The New York State Department of Mental Hygiene lost its second outstanding worker in the field of mental defect in less than two months last summer when Dr. Charles E. Rowe, superintendent of Syracuse State School for 11 years, died at that institution on July 30, 1942. Dr. Charles Bernstein, superintendent of Rome State School and a pioneer in the modern treatment of the mentally defective had died at Rome on June 13. Dr. Rowe was only 53 years old, and his illness had been brief. He had been in the State service since 1916.

Charles E. Rowe was born in McGraw, Cortland County, on March 5, 1889. He attended the local elementary and high schools and Cortland State Normal School before going to Syracuse University, from which he received his medical degree in 1916. Immediately afterward, he became an interne at Rochester State Hospital, was transferred to Binghamton the following year and was promoted to assistant physician and senior assistant physician there. In 1924, he was appointed first assistant physician at Hudson River State Hospital, and he served in that position until his appointment as superintendent of Syracuse State School on April 1, 1931.

In mental hospital service, Dr. Rowe had had much experience in clinic work and had taken an intense interest in treatment and research and had published a number of articles on dementia præcox and epilepsy. At Syracuse, his interests were largely concerned with health, education and the parole progress of the school's patients.

Dr. Rowe leaves his wife, Dr. Rhoda Howard Rowe, and a son, Robert Bradford Rowe, now a medical student at Syracuse University.

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### THE QUARTERLY CONFERENCE

The principal business of the Quarterly Conference of the New York State Department of Mental Hygiene on September 24, 1942, was the discussion of the effects of the extension of the Feld-Hamilton Law to cover the Department of Mental Hygiene. The law, intended to equalize conditions of employment and salaries in the entire civil service of the State promises to be of general benefit to nonmedical employees; but discussion at the conference brought out that, as it is likely to be interpreted, the new system of estimating allowances for food, quarters and services will increase

the net expenses of medical officers; and it is doubtful that it will prove to be satisfactory in hospitals where the situation is so different from that in the Capitol offices.

Formal addresses dealing with this problem were prepared for the conference by Charles L. Campbell, chairman of the classification board of the State Department of Civil Service, Dr. Frank L. Tolman, secretary of the Salary Standardization Board, and J. Buckley Bryan, Director of the Budget. Their papers and the minutes of the conference, with the pertinent discussion, will be published in the January issue of THE PSYCHIATRIC QUARTERLY SUPPLEMENT. The discussion indicated that the problem may be regarded as an important one; and the difficulties of the 1920's were recalled, when, before the present system of maintenance and staff quarters was provided, it was becoming increasingly difficult to attract promising physicians to the State hospital medical service.

## PAUL O. KOMORA IS APPOINTED ASSISTANT SECRETARY OF DEPARTMENT

Paul O. Komora, associate secretary of the National Committee for Mental Hygiene since 1932, was appointed assistant secretary of the New York State Department of Mental Hygiene on August 1, 1942. Mr. Komora had been with the National Committee for Mental Hygiene since 1917 and had become widely known as a writer, organizer and research worker in the fields of mental hygiene and social work.

Mr. Komora, a graduate of LaSalle Academy, New York City, in 1906, pursued academic work while engaging in business to qualify under Regents rules for professional study. He became associated with the National Committee for Mental Hygiene as stenographer and secretary to Dr. Frankwood E. Williams, associate medical director, in 1917; and, in 1918, he joined the army, serving as a noncommissioned officer, as secretary to Col. Thomas W. Salmon, director of neuropsychiatry in the American Expeditionary Force in France. After the war, he continued to serve as secretary to Dr. Salmon as medical director of the National Committee for Mental Hygiene; and he later became engaged in editorial and survey work for the national committee. Recently he has been collaborating with Dr. Edward A. Strecker of the University of Pennsylvania in the preparation of a biography of Dr. Salmon, and he is the author of a number of articles and reports. The national committee gave a testimonial dinner in his honor, at which there were many distinguished guests, when his transfer to the Department of Mental Hygiene was announced last summer.

Mr. Komora is a member of the American Association of Social Workers and the National Social Work Publicity Council. He has served as publicity director for American Psychiatric Association and American Orthopsychiatric Association conventions and as assistant secretary for the American Foundation for Mental Hygiene, the International Committee for Mental Hygiene and the Thomas William Salmon Memorial Committee.

## DR. MIRA TO GIVE SALMON LECTURES

The Salmon Committee on Psychiatry and Mental Hygiene of the New York Academy of Medicine, of which Dr. C. Charles Burlingame is chairman, announces that Dr. Emilio Mira, professor of psychiatry at the University of Buenos Aires, Argentina, and formerly full professor of psychiatry at the University of Barcelona, Spain, will deliver the 1942 Salmon Memorial Lectures. They will be given at the New York Academy of Medicine Building in New York City on the evenings of November 6, 13 and 20.

Dr. Mira was director of the neuropsychiatric services of the Loyalist forces during the Spanish civil war from 1936 to 1939; and he will lecture on the subject, "Psychiatry at War." The first lecture will take up the psychopathology of fear and anger reactions in wartime; the second, the duties of the psychiatrist in war and Dr. Mira's own personal experiences in the Spanish civil war; and the third, the question of new techniques for detecting and controlling "fighting power" in individuals and armies. In connection with this third lecture, he has originated a psychological test and has designed an apparatus, the "axiserometer," which measures the dominant trends in the personality by determining an individual's spontaneous movements under highly controlled conditions. This new test, the Salmon committee reports, has been applied successfully in England and Argentina.

Dr. Mira has studied and taught in Germany, France, Switzerland and England. From experience in Germany at war, he has wide knowledge of the German army's organization of psychological warfare, application of racial theories and use of war psychiatry. He is the author of numerous scientific works, including a "Manual of Psychiatry" which is widely used in Spain and Latin America. He has edited several psychiatric journals, including the "Archives of Neurology of Buenos Aires;" and the committee notes that he is "a frequent contributor to the psychiatric journals of three continents."

Dr. Mira received his medical license from the University of Barcelona and his medical degree from the Central University in Madrid. He held three full professorships at the University of Barcelona, on the faculties of

philosophy, economic and social sciences, and medicine. He was director of several mental institutions in Barcelona, founded a vocational institute there, and did special research into psychological tests at the Maudsley Hospital in London.

Besides Dr. Burlingame, the Salmon committee, which sponsors Dr. Mira's lectures, includes: Dr. Edward A. Strecker, president-elect of the American Psychiatric Association; Dr. Adolf Meyer, Dr. Samuel W. Hamilton, Dr. Edwin Zabriskie and Dr. C. Macfie Campbell.

## DR. KIEB RETIRES AS HEAD OF NAPANOCH

Dr. Raymond F. C. Kieb, former Commissioner of Correction, retired on September 15, 1942, as superintendent of the State Institution for Male Defective Delinquents at Napanoch. He had been with the Department of Correction since he entered Matteawan State Hospital in 1905, following his graduation from Cornell Medical School and an interneship in the Children's Hospital in New York City. He became superintendent of Matteawan in 1913 and served in that position until 1927, when he took a leave of absence for three and one-half years service as Commissioner of Correction. He returned to Matteawan as superintendent in 1930 and was transferred to the superintendency of Napanoch in 1940. He will live at Magnolia Manor near Beacon and will maintain an office in New York City.

## STEPHEN W. RANSON, NEUROLOGIST, IS DEAD

Dr. Stephen Walter Ranson, professor of neurology and director of the Neurological Research Institute at Northwestern University Medical School since 1928, died at his home in Chicago on August 30, 1942, at the age of 62. He was the author of the textbook, "The Anatomy of the Nervous System," now in its seventh edition, was a contributor to many scientific publications and was a member of the editorial board of "The Archives of Neurology and Psychiatry." A graduate of the University of Minnesota, Dr. Ranson obtained master of science and doctor of philosophy degrees from the University of Chicago and received his medical degree from Rush Medical College in 1907. After his interneship, he joined the Northwestern University medical school faculty and remained there until his death, with the exception of a three-year period when he was at the Washington University Medical School at St. Louis. He leaves his wife, two daughters and a son, Capt. Stephen W. Ranson, of the United States Army Medical Corps.

## PAMPHLETS FOR DEFENSE WORKERS AND SPEAKERS

The New York City Committee on Mental Hygiene of the State Charities Aid Association announces publication of a number of pamphlets of interest to defense speakers and workers. Current issues include: "Morale in War-Time, An Outline for Defense Speakers;" "Notes for Air Raid Wardens Concerning Civilian Morale and Panic," by George S. Goldman, M. D.; and "Balanced Diets and Balanced Personalities," by Nina Ridenour Ph.D., and Edith Williams, Ph.D. They may be obtained from the committee, 105 East 22d Street, New York City, at 10 cents each, in quantities of 25 or more at five cents each, and by CDVO speakers in greater New York free.

## PSYCHIATRIC INSTITUTE COURSES

The annual graduate courses in neurology and psychiatry, given by the New York State Psychiatric Institute and Hospital and the College of Physicians and Surgeons of Columbia University, are scheduled this year from October 5 to December 11. They are open to staff physicians of the New York State Department of Mental Hygiene without charge and to other medical graduates for a fee of $250. Physicians outside the Department may make application for attendance to the registration office of the College of Physicians and Surgeons.

## SEMINAR ON NON-MILITARY WARFARE

The Committee on National Morale is conducting a new series of evening meetings in New York City on nervous and mental aspects of both military and non-military total warfare. Speakers at the first meeting on August 19 included Dr. Foster Kennedy, Dr. D. Ewen Cameron and Dr. Lydia Giberson, industrial psychiatrist.

## COMMONWEALTH FUND EDITOR DIES

Graham Romeyn Taylor, director of publications of the Commonwealth Fund for the last 20 years, died in New York City on August 30 at the age of 62. Active as a writer and research worker, he had directed the publication of many works of importance to psychiatrists and psychiatric social workers.

## ACADEMY OF PHYSICAL MEDICINE TO MEET

Symposia of particular interest to psychiatrists—on the subjects of encephalography, electric shock and fever therapy—will feature the twentieth annual scientific session of the American Academy of Physical Medicine at the Hotel Statler, Boston, October 14 to 17. Capt. William Seaman Bainbridge, M. C., U. S. N., long associated with the institutions of the New York State Department of Mental Hygiene as a consulting surgeon, and author of a number of articles on the interrelationships of surgery and psychiatry, is president of the academy. Lt. Col. William D. McFee, M. C., U. S. A., is chairman of the committee on program; and copies of the program may be obtained from the secretary-treasurer, Herman A. Osgood, M. D., 144 Commonwealth Avenue, Boston. The session will be devoted to the general subject of clinical and scientific presentations involving techniques of importance in wartime medicine.

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## PSYCHODRAMATIC INSTITUTE COURSES ARE OFFERED

The Psychodramatic Institute of New York City has announced postgraduate courses for physicians in the subjects of group psychotherapy and the psychodramatic treatment of psychoses. J. L. Moreno, M. D., is director of the institute, which is located at 101 Park Avenue. Members of the advisory board are Nolan D. C. Lewis, M. D., director of the New York State Psychiatric Institute and Hospital and professor of psychiatry at Columbia University; John Dewey, professor emeritus of Columbia University; William H. Kilpatrick of Teachers College, Columbia University; and Gardner Murphy, professor of psychology at the College of the City of New York. The institute conducts a psychotherapeutic service for patients referred by physicians—general practitioners as well as mental specialists. The therapy is group treatment; and the institute notes that "The patient . . . is tested, diagnosed and treated in action, in standardized life-situations or in such situations as his mental syndrome requires."

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## NATIONAL FOUNDATION ANNUAL MEETING

The third annual medical meeting of the National Foundation for Infantile Paralysis will be conducted in New York City, December 3 and 4. The current issue of the "National Foundation News" announces that the regional director plan, designed to stimulate the work of the foundation and in effect almost a year, has been successful.

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